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REPORT

RELATING TO THE REGISTRATION OF

BIRTHS, MARRIAGES AND DEATHS

IN THE

PROVINCE OF ONTARIO

FOR THE

YEAR ENDING 31ST DECEMBER,

1898.

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO.



TORONTO:
WARWICK BRO'S & RUTTER, PRINTERS, 68 AND 70 FRONT STREET WEST.
1900.

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OFFICE OF THE REGISTRAR-GENERAL FOR ONTARIO,

TORONTO, January 2nd, 1900.

To Sir OLIVER MOWAT, K.O.M.G.,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR :

In compliance with the Statute in that behalf, the undersigned respectfully presents to Your Honour the Annual Report of Births, Marriages and Deaths for the year ending 31st December, 1898.

Respectfully submitted,

J. R. STRATTON,
Registrar General.

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TORONTO, Jan. 2, 1900.

To the Hon. J. R. STRATTON,

Registrar-General of the Province of Ontario.

SIR,—I have the honor herewith to lay before you for your consideration, the twenty-ninth Annual Report regarding Births, Marriages and Deaths in the Province of Ontario, it being for the year 1898.

Population.

The population adopted as the basis of calculation for the tables of this report, is that based upon the Canada census of 1891. It is based upon the arbitrary assumption that there has been an average increase per annum of one per cent. during each year since this period, the increase being dependent upon the difference between the births and deaths recorded during any year. The population adopted for the report of 1897, obtained by the addition of one per cent. to the population as given for each of the counties and territorial districts, was 2,257,378 ; hence the estimated population for 1898 is 2,279,929.

That there may be actually a smaller population in the Province than is obtained by this arbitrary method of calculation, is gathered from the fact that the total recorded increase of births over deaths is 20,229, or 0.89 of one per cent. On the other hand there is good ground for the belief that the number of recorded births does not represent the total births which have actually occurred. Apart from imperfect registration, careful examination of the records reveals the fact that a notable number of still-births are recorded only amongst the deaths. Thus as will be seen from the following table, which shows the total still-births in the 13 cities of the Province, recorded as deaths, of the total 433 still-births, only 201 were recorded as births by the Division-Registrars in their returns to the Registrar-General, or 232 still-births were unrecorded as births.

Still-Births in Cities in 1898, showing the number recorded in Death Schedules as compared with Birth Schedules.

Cities.	Death Schedules.	Birth Schedules.	Per Cent.
Guelph	10	10	100
St. Thomas	6	5	83
Stratford	8	0	-----
St. Catharines	14	5	36
Windsor	20	18	90
Belleville	4	4	100
Chatham	10	10	100
Brantford	25	25	100
London	12	3	25
Kingston	14	12	85
Ottawa	75	15	20
Hamilton	52	35	67
Toronto	183	59	32

By comparing the total still-births 433 in cities, with the total births in cities 9,343, inclusive of all still-births however registered, it is found that the percentage to the whole of still-births is 4.63. If the proportion of still-births bears the same ratio in all municipalities other than cities and are unrecorded as births in the same proportion, then the increase of births in the Province will be 2.5 per cent. added to the total 46,599 recorded births, giving a total of 47,553, or an actual increase of 954. That the neglect to record still-births in births has not, however, prevailed in rural municipalities to the same extent as in cities is gathered from the following table:

Table showing Still-Births by Counties, as recorded under Deaths and under Births, 1898.

Counties.	Total Births, 1898.	Total still-births including in- fants who died under one day old recorded under Deaths.	Still-births re- corded under Births.	Still-births not recorded un- der Births.
Algoma	817	14	13	15
Brant	702	56	31	25
Bruce	1,310	35	32	3
Carleton	2,183	109	92	17
Dufferin	449	10	7	3
Elgin	763	13	10	3
Essex	1,607	45	38	7
Frontenac	919	22	19	3
Grey	1,426	23	22	1
Haldimand	403	3	2	1
Halton	410	9	9	0
Haliburton	222	3	3	0
Hastings	1,202	18	16	2
Huron	1,278	25	21	4
Kent	1,313	59	43	16
Lambton	1,170	26	19	7
Lanark	743	15	14	1
Leeds and Grenville	1,062	7	6	1
Lennox and Addington	467	7	7	0
Lincoln	560	26	19	7
Middlesex	1,615	24	15	9
Muskoka	601	9	9	0
Norfolk	651	10	9	1
Northumberland and Durham	1,218	28	27	1
Nipissing	897	11	9	2
Ontario	854	25	23	2
Oxford	1,073	37	34	3
Peel	408	2	1	1
Perth	999	20	10	10
Peterborough	831	29	29	0
Prescott and Russell	1,623	28	24	4
Prince Edward	305	3	3	0
Parry Sound	680	12	11	1
Rainy River	235	8	5	3
Renfrew	1,357	24	24	0
Simcoe	1,744	30	28	2
Stormont, Dundas and Glengarry	1,338	29	28	1
Thunder Bay	254	6	6	0
Victoria	729	32	32	0
Waterloo	1,151	27	25	2
Welland	656	9	8	1
Wellington	1,197	22	21	1
Wentworth	1,673	66	47	19
York	5,509	212	77	135
Totals	46,599	1,228	928	300

Births.

The total births recorded in 1898 were 46,599, as compared with 47,323 in 1897, showing a decrease of 724 for the year. The rate calculated per 1,000 is 20.4, or a decline of 0.5 per 1,000 for 1897. The variations as regards increases and decreases are set forth in table 1 of this report (page 28). The distribution of the increases and decreases by counties is a matter of much interest as indicating both the effects of movements of populations and variations in their social status; as also the degree of thoroughness with which returns are made and collected. In examining the returns there is seen a total increase in the cities of 174 births over 1897, but a notable decrease appears in the towns, amounting to 174. The counties in which increases and decreases are recorded are set forth in table 1, page 28. Those showing an increase are chiefly those in which, the growing cities are situated. Thus, Carleton shows an increase of 95, Essex has 42, Middlesex 50, Wellington 52, and Wentworth 151. Those showing the more notable

decreases are the counties very largely agricultural. Thus, Bruce shows a decrease of 157, Grey 55, Kent 89, Lambton 61, Leeds and Grenville 60, Ontario 49, Peterborough 59, Renfrew 169.

Such would seem to be the natural results of influences which have been operative for years, due to the change of occupations of the population of a district; but on closer examination into the facts, other elements are found to enter in, which in some instances argue strongly against so satisfactory an explanation. Thus York shows a decrease of 40, although Toronto is situated therein. Brant shows a decrease of 69, with Brantford a rapidly growing city, while Waterloo, a county with an unusual number of growing, manufacturing towns, shows a decrease of 44.

In order that the primary question of completeness of returns may be to some extent determined, a circular was sent to all Division-Registrars on January 25th, 1899, containing the following paragraph:

"The Registrar-General is desirous of obtaining information as to how many Division-Registrars receive the fees for their work as Division-Registrars, as defined under Section 36 of the Act, and how many have the fees commuted by receiving as Municipal Clerk only a salary for which they are expected to do all the work laid upon the Clerk under the Statutes. I shall, therefore, take it as a favor if you will send a card stating in which manner you are paid, as it is desirable that this work should be paid for specially in order that the time necessary for obtaining complete returns may be given to it."

Replies were received from 329 Division-Registrars, and the results of the replies are set down in the following table:

County.	Cities.			Towns and Villages.			Townships.		
	Total.	Yes.	No.	Total.	Yes.	No.	Total.	Yes.	No.
A'goma				3	3		40	7	1
Brant	1	1		1	1		5	3	
Bruce				10	5	1	16	10	
Carleton	1	1		3	1		10	3	
Dufferin				3	1		6	2	
Elgin	1	1		5	1	1	7		
Essex	1	1		7	5		17	6	1
Frontenac	1		1	1	1		16	2	
Grey				6	3	1	10	5	1
Haldimand				4	1		10	1	3
Halton				5	2		4	2	
Ha'iburton							10	2	1
Hastings	1	1		5	2		18	8	
Huron				9	3	1	17	8	2
Kent	1		1	8	3	1	19	5	
Lambton				6	5		9	4	
Lanark				5	3		13	4	
Leeds and Grenville				8	1	2	15	6	
Lennox and Addington				3	2		10	2	1
Lincoln	1	1		5			8	3	1
Middlesex	1	1		7	1	1	15	5	
Muskoka				4	1	2	16	7	1
Norfolk				5	3		9	6	
Northumberland & D.				9	7	1	15	7	
Nipissing				4	2		14	1	1
Ontario				5	3	1	12	9	1
Oxford				5	2		11	7	1
Peel				3	1		5	2	1
Perth	1	1		5			11	5	
Peterboro'				5	2		12	6	
Prescott and Russell				5	2	1	11	3	
Prince Edward				2	1		7	3	
Parry Sound				3	1		27	9	1
Rainy River				1			8		
Renfrew				4	1		22	11	
Simcoe					4		17	6	
Stormont, D. and G	10			8	3		11	5	
Thunder Bay				2			5		
Victoria				5	3		11	4	
Waterloo				8	4		5	4	
Welland				8	3		8	4	
Wellington	1	1		9	3	1	12	5	
Wentworth	1	1		2	1		8	4	
York	1		1	13			10	3	

The percentage of cities making returns is 100 and two only of the 13 registrars are not paid specially for their work.

The percentage of the towns and villages making returns is 46 per cent., and of this number 86 per cent. report they are paid fees, while the balance, 14 per cent., have their fees commuted.

The percentage of townships making returns, excluding those in the Territorial Districts, many of which are unorganized, is 44 per cent., while of these 92 per cent. report that they receive the fees in accordance with the statutory provision, 8 per cent. only, not receiving the fee.

It is difficult to form any accurate idea of what the proportion of those who receive fees is, in the municipalities not reported upon. It is a fair inference, however, that where a Division Registrar has neglected to make a reply to a circular dealing with so important a matter, he is not always of the class most careful in his attention to this registration work. The fact, however, that the Division-Registrar is paid for every registration, in addition to the fact that in all township municipalities, the assessors are required to collect information regarding births and deaths during the year, further makes it a fair inference that the returns from these municipalities where the salary is not commuted, are more nearly complete than in the large centres.

It is quite evident, however, from the replies given in some instances, that where the salary of a town or city clerk has gradually grown to what may be called a living wage, the tendency appears to be to commute salaries no matter what extra duties are imposed upon the clerks by the Legislature. In order to in some degree accurately estimate the effect of these influences upon the returns, but especially upon the birth rate, since it is the collection of birth returns which demands persistent endeavors on the part of the Division Registrars, the following table is prepared of births in cities during the last 10 years.

*Table showing Number of Births in Cities in Ontario from 1889 to 1898.
(From Assessors' Returns).*

	Pop. 1889	Pop. 1898	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898
Toronto	130,452	186,517	4,946	4,774	4,730	4,436	4,153	4,210	4,131	4,246	4,078	4,122
Hamilton	44,299	51,011	1,130	1,036	1,176	752	1,109	1,028	1,086	1,128	969	1,102
Ottawa	41,000	55,386	1,726	1,908	802	729	1,089	864	888	1,198	1,273	1,349
London	26,786	38,575	568	516	605	616	604	573	574	599	552	627
Kingston	18,284	18,350	633	511	453	432	423	297	295	335	356	354
Brantford	13,384	18,009	349	330	331	350	349	314	370	340	408	387
St. Thomas	10,408	11,156	264	204	228	216	240	228	205	220	221	158
Guelph	10,413	10,892	262	204	235	237	249	240	228	240	259	246
St. Catharines ..	10,080	10,274	146	141	131	144	126	152	130	159	200	158
Belleville	10,105	10,183	213	185	157	154	146	142	148	143	151	169
Stratford	9,404	10,369	202	204	197	165	176	178	174	159	134	159
Windsor	9,011	11,334	240	181	269	252	303	256	243	257	237	229
Chatham	8,278	8,923	140	116	151	139	147	161	110	165	199	151
Total for each year	350,934	440,979	10,819	10,410	9,474	8,622	9,114	8,634	8,582	9,189	9,687	9,211

The broad fact is set forth in this table showing that over a period of ten years in a population estimated in the census year 1891 at 407,058 (or 395,229 by municipal returns), and during which ten year period the yearly municipal enumeration has shown an increase of 17.37 per cent., there has been an absolute decrease of births in the 13 cities from 10,819 in 1889 to 9,211 in 1898, or a difference of 1,608. Some of the cities show such marked variations in different years as in the case of Ottawa in 1889 and 1890, that it is evident some irregularity of registration from the normal existed.

Had the rate of increase of registrations from 1889 to 1898 been the same as that in population for the same period, 12,709 births would have been registered in 1898 instead of 9,211. If, however, the figures for different cities be examined it is apparent that no variation in the average yearly increase of population adequately explains such discrepancies as appear from year to year. While in two or three instances cities show an actual decrease in population of one or two hundred, yet the returns of births — as in

the case of Kingston -- show such marked variations that we can only conclude that imperfect registration can account for such discrepancies. An enquiry into the particulars regarding the several cities gives us certain information of interest. Thus in Ottawa, Kingston, Brantford, Chatham, and St. Thomas, the Division Registrar has been changed during this period with results which in one or two instances may be seen in the returns. The tables show that in 11 instances the Division Registrars (Municipal Clerks) are paid specially for each return, and it may be supposed that their returns would be complete. That they are not so may be fairly inferred from the notable differences in different cities where populations have increased during the period.

Thus St. Thomas with an increase during the ten years of 613, shows a decline in the birth rate of 106 in the period : that is, the rate was 67 per cent higher in 1889 than in 1898. Again Kingston with a practically stationary population, has 279 of a decrease in 1898 as compared with 1889, the rate being 79 per cent higher in 1889 than in 1898.

In both these cities the Division-Registrar has changed during the period. In two other cities where the Registrars have not changed, St. Catharines and Stratford, the returns show no notable variations from year to year, yet the rate throughout the whole period is so much below the general average that only one conclusion is possible, viz ; that a chronic neglect to obtain complete returns is apparent. Thus in St. Catharines there were but two years in the ten year period during which the deaths did exceed the births, these two being the first two years under the new Act, that of 1896. Perhaps, however, there is no better illustration of defective registration of births than in the city of Toronto. No change has taken place in the occupant of the office of Division-Registrar during this ten year period, and the population has increased by 47,065, according to the municipal returns. In spite of this fact, however, the births show an absolute decrease of 824, or there were 20 per cent more births reported in 1889 than in 1898. If, however, the population according to municipal returns be taken into the calculation, viz : an increase from 139,452 in 1889, to 186,517 in 1898, then had the rate in 1889 been maintained, there would have been 6615 births registered in 1898. In other words a relative decrease of 64 per cent has occurred in the birth rate of Toronto during the last ten years.

Such then is the situation of the statistics of births in our cities three years after the passage by the Legislature of the Act of 1896, which provides that Division-Registrars "shall use all available means to obtain the necessary information hereinafter required in this Act," and shall be paid 20c. for each return by the municipality ; which further states that the parent or guardian of every child born in this Province, "or if there is no such person, then the nurse or midwife present at the birth" shall within thirty days from the date of the birth give notice to the Division-Registrar of such birth ; while the Act further provides, "It shall be the duty of every qualified medical practitioner attending at the birth of any child born within this Province, to give notice thereof forthwith to the Division Registrar of the division in which the child was born."

Further comment on these results seems unnecessary. Until the Registrar-General is supplied by the city municipalities with returns approaching completeness, it is useless to attempt to draw any conclusions as to the causes of decreasing birth rates, or for the public to expect to find in the future in the Registrar-General's Department records of returns which have never been made. What this means, may be gathered from the fact that during 1899 there were 321 searches for births said to have occurred within the previous 30 years since the Registration Act was passed. Of these 321 searches, 96 were found not to be on record. It seems therefore, in case this number of searches of births occurring over this 30 year period should represent a fair average of registration, that a percentage of omissions amounting to 30 per cent has occurred throughout the period.

The remedy for this existing state of affairs is clearly indicated in the results of present methods. Wherever adequate payment for the work done, exists, the returns are relatively complete ; and no payment to a city clerk of a single salary covering all duties laid upon him, has ever served to create in him such enthusiasm for collecting statistics as to make his returns complete. The authority which the Registrar-General of England exercises, of filling vacancies or replacing a Division-Registrar when his work has proved to be incomplete and unsatisfactory, seems to be "demanded by the situation as it has been illustrated in the preceding study."

Marriages.

The total marriages recorded in 1898 in 777 municipalities and returned to the Registrar-General, were 15,375 as compared with 15,293 in 1897. This gives a marriage rate of 6.7 for the Province, or 0.1 less per 1,000 population than in 1897, its rate having been 6.8. Of the counties, 17 show an increase, while 26 show a decrease as compared with 22 which showed an increase in 1897. There seems to have been no general rule governing the increases and decreases as compared with the previous year. Thus, Carleton in 1897, showed a decrease of 19, and in 1898 an increase of 1; Essex, in 1897, showed a decrease of 52, and in 1898 an increase of 147. This latter rate of course, as mentioned in previous reports, is largely influenced by marriages of persons from the United States. An interesting series of increases is seen in a group of counties in Eastern Ontario, viz., Lanark, 51; Lennox and Addington, 17; Peterborough, 32; Prescott and Russell, 60; and Stormont and Glengarry, 20. An equally important group of decreases is seen in Western Ontario, viz., in Elgin, 36; Kent, 12; Lambton, 23; Middlesex, 69; Norfolk, 33; Oxford, 10; Lincoln, 38 and Welland, 20. Thus, with the single exception of Brant, with the small increase of 29, every county in the double tier of counties along Lake Erie, showed a decrease in the marriage rate amounting to a total of 261. A similar but less notable decline in the rate is seen to have occurred in Huron, with 63; in Bruce, 9, and in Simcoe, 11.

This decline, especially in the Lake Erie counties, seems to be general in regard to marriages; these having hitherto been assumed to be fairly well returned, and to be still more complete, since the amendment to the Marriage Act in 1897, requiring license issuers to forward to the Registrar-General copies of all licenses issued by them. No explanation of this uniform decrease, except on the supposition of alterations in the movement of populations, especially in rural districts, and therewith a variation in the age period of the resident inhabitants seems possible. The variation in the population of districts by age periods, has been frequently referred to in the reports of the Registrar-General of England, as affecting directly the marriage as well as the birth and death rates. In addition to this, however, it would appear that this decline in the marriage rate in Ontario is associated with a distinct tendency to delay marriage. As was stated in the Report for 1897:—

“ Taken in conjunction with the following table of percentages of marriages in the several life periods by counties, this table affords evidence similar to that in other countries, that there is a distinct tendency to delay marriage; which means, necessarily that the proportion of marriageable persons in any community decreases with each semi-decade, and bears a close relationship to the question of a decreasing birth-rate.”

MARRIAGES IN CITIES.—The total marriages recorded in 1898 in the thirteen cities of Ontario, with a population of 441,360 was 4,589, or a total of 381 over 1897. The increases occurred principally in Toronto, with 195; Ottawa, with 118; and Windsor, with 90. Several cities showed a decrease, London having 30; Kingston, 40; St. Thomas, 7; Guelph, 23, and St. Catharines, 22. If these increases and decreases be compared with the population increase in 10 years, as shown in the table of births in cities on page 30, it will be seen that the cities with a decreased marriage rate, are cities with a practically stationary population during the period, and hence the law regarding age distribution of population becomes applicable as possibly explaining such decreases. There is reason, however, to believe that the causes which have been shown to produce defective birth returns, have been operative to some extent in the case of marriages as well. Thus London which showed a decrease of marriages in 1897 of 177, shows a further decrease of 30 in 1898; but by a recently received return for 1899, it shows an increase over 1898 of 71, or a total of 360 marriages for the year. It is interesting to note that the Registrar of London received for the first time fees for the work done in 1899.

As in former Reports it will be noted that the marriage rate in cities, as seen in table 2, is high as compared with the general rate, it being 10.3 per 1,000. If the anomalous rate in Windsor be separated from the balance of the cities, the marriage rate in cities may be considered as 9.0. While it is true that this rate should properly be further reduced by a percentage of non-residents who have gone to be married in neighboring cities, there is, however, as seen in all growing populations, the tendency for the

marriage rate to be higher in cities than in the more stationary rural districts and villages. Apart from these causes for variations from the average rate, there is the question of completeness of returns. An illustration, that of London, has been given of how every class of persons responsible for making returns is lax in reporting, in proportion to the indifference of the registrar; hence we are unable to believe that all clergymen systematically make returns of marriages celebrated by them. This supposition is proven by the results of a prolonged search for records of marriages for which licenses returned by the Registrar-General, were granted in 1897. The Registrar-General received during the year 12,153 marriage license cards from the various issuers and deputy issuers throughout the Province. After allowing a delay of six months so that all clergymen, registrars and issuers might send in their respective returns, a comparison was made of the licenses with the lists of marriages returned, with the result that 1,980 were found not to have been recorded in the municipalities where the licenses were issued. The Registrar-General thereupon issued a circular letter to each Division Registrar, giving the names of persons for whom a marriage license had been issued, but whose names did not appear in the marriage returns, and asked that enquiry and a reply regarding the matter be promptly made.

Much correspondence with license issuers, clergymen and others, resulted from this circular, explaining in many instances why certain marriages had not been returned. A common reply from clergymen was that the matter had been overlooked or forgotten; in a few instances the reply was that the lady had changed her mind before the ceremony was performed; while a still commoner reply was that the license was issued in one municipality, while the marriage had been celebrated in another.

It was a fairly satisfactory result of such a tedious search that the Registrar-General should have succeeded in obtaining 490 marriages, the recording of which would not have otherwise occurred. This amounted to 3 per cent. of the total marriages recorded. The work for 1898 is yet incomplete, but as a result of enquiries in nine counties, with the despatch of 104 letters respecting 248 marriages, 40 replies have been received regarding 72 marriages. To show how difficult it is to obtain complete statistics of this character, it may be mentioned that 35 returns of marriage licenses issued were made to the department from Frontenac in 1898 for which no corresponding marriages are found on record. These omissions occurred in nine municipalities; letters were sent to the registrars of each. Only three replies, covering eight marriages, were received, resulting in three marriages having been found recorded in some other municipality.

DISTRIBUTION OF MARRIAGES.—The distribution of marriages by months becomes a matter of some interest in connection with accuracy of returns. In 1898 as in other years, the month of December shows a large number of marriages to have taken place, being one-tenth of the total for the year. As the Act gives thirty days as the time for making a return, it is plain that a certain number of marriages celebrated in 1898 would be registered in 1899. The month of June, 1898, as in 1897, has fallen to second place, June returning the highest number of marriages in any month, it being 1,741; while May, as in several past years, returns 897, or the lowest in the year.

The relative number of persons by denominations who were married in 1898 will be found in table 8. This relative number is practically the same as for many years past.

Deaths.

The total number of deaths recorded in Ontario in 1898 was 26,370, as compared with 27,633 in 1897, being a decrease of 1,263. On a basis of population seen in table 1 this gives a death-rate of 11.5 per 1,000 or a reduction of 0.7 per 1,000 as compared with 1897. Of the 44 counties 12 only show an increase, while 32 show a decrease. Of those showing any notable increase, we have Perth with 77, Wentworth 87, Peterborough 30, Grey 35, and Dufferin 31. Of the decreases the principal are York with 300, of which 256 occurred in Toronto, Renfrew 145, Prescott and Russell 139, Huron 89, Bruce 67, Middlesex 63, Norfolk 52, and Stormont, Dundas and Glengarry 95.

There is reason to believe that the death returns are in a large measure complete, owing to the stringent laws against burial without a permit. It is gratifying to know that there is no county showing a great increase. Some instances may exist of an in-

crease due to improved registration, but a close examination of the table of deaths from different diseases may serve to explain an abnormal increase, owing to there having been an outbreak, as of diphtheria during the year.

The death-rate must be considered as showing an extremely satisfactory condition of the public health, especially in the matter of preventable diseases. That it is especially to this class of diseases that the reduction is due is seen in the fact that while in 1897 the death rate from small-pox, scarlatina, diphtheria, measles, whooping cough and typhoid caused 6 per cent. of the total deaths, this rate in 1898 was reduced to 5 per cent. of the total deaths. Or while the total reduction of deaths was 0.45 per 1,000 in 1898 as compared with 1897, the reduction caused by the decrease in preventable diseases is shown to have been 22 per cent. of this reduction, while in 1897 this class produced but 6 per cent. of the total reduction.

The distribution of deaths by Counties in 1898, as regards the rate per 1,000, shows much the same condition as in the several past years. Thus of the group of counties along Lake Huron and on the central plateau, viz—Bruce, Grey, Wellington, Halton and Perth,—all but Perth show a death-rate below 10 per 1,000. Further, it may be stated that the counties of Lincoln and Welland, with their clay lands and lower levels, again show a higher rate, but with a definite decline of 1.9 and 1.5 respectively per 1,000. The St. Lawrence counties of Stormont, Dundas and Glengarry, Leeds and Grenville similarly maintain their higher rate. They, however, likewise show a reduction of 1.4 in the first, while the latter is practically the same as in 1897. The seemingly high death rates in Algoma, Nipissing and Thunder Bay, as referred to in 1897, are accounted for by the irregular distribution of the recently increased mining population, shifting from year to year.

DEATHS IN CITIES.—In table 2 on page 30 will be found the death-rate for cities. The total deaths for 1898 was 6,894, as compared with 7,177 in 1897 and gave a death rate from all causes of 15.6, or a decrease of 0.8 per 1,000. Inasmuch as the population increases of the cities for the past decade, according to municipal returns, was 25.6 per cent., or 2.5 per cent. of an increase per annum, this reduction of the death-rate is gratifying. Four cities show a slight increase, viz—Hamilton with 73, London with 15, Guelph with 25, St. Catharines with 7, and Stratford with 17; while 8 cities show a decrease, these being Toronto 256, Ottawa 21, Kingston 6, Brantford 29, St. Thomas 40, Belleville 38, Windsor 11, Chatham 19. These results compare favorably with the progress made in the cities of other progressive countries. The following are the death rates for certain other cities in 1898:

	per 1,000.		per 1,000.
Montreal .....	.....	London, Eng.....	18.7 per 1,000.
Halifax.....	"	Manchester, Eng.....	21.9 "
St. John	14.9	Boston, Mass.....	20.6 "
Winnipeg	12.1	Lowell, "	20.4 "
Vancouver	11.9	Providence, R.I.....	19.9 "
Leeds, Eng.....	19.3	Pittsburg, Pa.....	16.5 "
Birmingham, Eng	20.0	Buffalo, N.Y.....	12.88 "
Glasgow, Scot	21.2	Rochester, N.Y.....	12.32 "
Edinburgh, Scot	19.7	Albany, N.Y.....	20.1 "
Dublin, Ireland.....	26.8		

DEATHS BY CLASSES OF DISEASE.—In the adoption of the Bertillon system of classification of diseases, we are able to make for the first time a comparison with Michigan the only other State or Province which has published its returns for 1898, according to this classification. A comparison with a State situated geographically so similarly to Ontario, as Michigan is, with a climate and soil so alike, and a population composed of much the same elements, distributed as regard urban and rural populations in much the same percentage, is of extreme interest and importance. The population for Michigan in 1898, is given at 2,353,855 calculated on an arbitrary basis, which, if applied in Ontario, would bring the two populations to very nearly the same number.

The total deaths recorded in Michigan for 1898 were 29,474, giving an average death rate of 12.52 per 1,000.

Regarding the several groups, that of *Communicable Diseases*, including all those except tuberculosis, dealt with under the Public Health Act is of interest. The total in Ontario is 1,769, while the group in Michigan gives a total of 2,015, or 0.85 compared

with 0.75 per 1,000 in Ontario. The succeeding group of other *general diseases* which includes tuberculosis, gives 5,213 in Ontario as compared with 5,166 in Michigan. This is to some degree due to the inclusion of all deaths from marasmus, atrophy and anaemia, under one year of age, with tuberculosis in the Ontario returns. This total amounted to 311.

Of Diseases of the *Nervous System*, Michigan shews 3,963, as compared with 3,197, or a difference of .28 per 1,000.

Of *Diseases of Circulation*, Ontario shows 1,851, as compared with 2,540 in Michigan, or 0.81 as compared with 1.07.

Of the *Diseases of the Respiratory System*, the Ontario returns show 2,715 as compared with 3,236 or less by 0.18 per 1,000.

Of the *Diseases of the Digestive System*, Ontario gives 2,820 as compared with 4,106, a very notable difference in favor of Ontario, it being 0.51 per 1,000.

Of *Diseases of the Genito-urinary class*, the deaths in Ontario were 840 as compared with 1,452 in Michigan, or a difference of 0.24 per 1,000.

Of *Diseases of the Puerperal class*, the totals in Ontario were 245 as compared with 387 in Michigan, or more than one third less.

Of the group which includes *malformations, diseases of infants and diseases of old age*, the total in Ontario is 5,745 as compared with 1,960 in Michigan.

In this respect the Michigan returns show a noted improvement over the Ontario returns, and indicate a much greater accuracy in the return of causes of deaths, and hence of the classification of disease under the several special classes. In the Ontario returns, 2,915 of the total under this class occur under one year, and 2,763 over 70 years; while in Michigan, but 1,171 are given under one year, and 657 under senile debility.

It may further be stated that the notable difference in *Diseases of Circulation* in these reports may be due to heart failure in the Ontario returns occurring in persons over 70 having been placed in the class of diseases of old age. Under the *division of violence, including suicides and accidents* the Ontario returns give 1,091 as compared with 1,677.

Under the final classes of *Causes ill-defined*, Ontario has 850 as compared with 1,347 in Michigan.

DEATHS FROM SPECIAL DISEASES.—The diseases of the *Communicable Class* of greatest interest are given in the following comparative table.

Table of Deaths from Communicable Diseases.

Year.	County.	Smallpox.	Scarlatina.	Diphtheria.	Measles.	Whooping-cough.	Typhoid.	Malaria.
1897.....	Ontario	169	976	80	167	355	38	
1898.....	Ontario	222	634	115	126	405	25	
1898.....	Michigan.....	1	91	456	131	282	499	73
1897.....	New Jersey	203	1,382	156	321	478	132	
1897.....	New York	27	815	4,310	860	850	1,325	400
1898.....	Minnesota	31	182	Not returned	Not returned	255	Not returned	

Compared with other areas of the continent in northern latitudes, that of the two land areas largely enclosed by the Great Lakes, viz., Ontario and Michigan, are seen to compare most favorably with the States of the Atlantic seaboard, as will be seen from the death-rates in New Jersey and New York. That the decline in the death-rate is not accidental but is due largely to the decline of communicable diseases—measles and whooping cough—is seen in remarks already made regarding deaths by counties.

The influence of climate and habits of life upon the mortality from communicable diseases is interesting, as seen in comparing deaths in Ontario with those in Scotland, the Argentine Republic, Cape Colony, and Jamaica. The population of the Argentine is distributed over 230,000 square miles, with an urban population of 362,082, and a rural population of 559,095. Adopting the census population of 1890 for calculation in the Argentine the following table is given.

Comparative Table of Deaths in Different Countries.

	Smallpox.	Whooping cough.	Diphtheria and croup.	Typhoid.	Tuberculosis.	Anthrax.
Ontario 1898	.....	0.05	0.27	0.17	1.4	.....
Scotland 1898	.002	0.43	0.63	0.90	0.94	(Phthisis only,)
Argentine Republic 1898	0.3	0.2	0.3	0.5	1.8	36 cases.
Cape Colony 1898	0.03	0.8	0.3	0.5	1.6	.....
Jamaica 1898	.....	0.18	.....	.....	1.6	.....

In the latter two countries the distinction between the coloured population and the whites is of great importance in estimating the relative healthfulness of climate.

MEASLES AND WHOOPING COUGH—Measles show a mortality of 115, as compared with 80 in 1897; while whooping cough has decreased from 163 to 126. The type of both diseases would seem to be essentially mild as compared with that in Great Britain, where the rate in the great towns of Scotland was for measles and whooping cough respectively in 1897, 0.339 and 0.43 per 1,000.

DIPHTHERIA.—The total deaths from diphtheria and croup in 1898 were 634, as compared with 976 in 1897. There is no disease in which the progress of Preventive medicine has been more marked than in diphtheria during the past ten years. The following table of deaths in Ontario in successive years is illustrative:—

Table showing Deaths from Diphtheria and Croup in Ontario.

1887	1,786	1893 . . . . .	.....	1,044
1888	1,489	1894 . . . . .	.....	1,075
1889	1,101	1895 . . . . .	.....	942
1890	893	1896 . . . . .	.....	925
1891	955	1897 . . . . .	.....	976
1892	890	1898 . . . . .	.....	634

The remarkable falling off so pronounced in 1898 must doubtless be due to various influences, amongst which primarily may be placed the greatly increased knowledge amongst the people of its extremely contagious character, and the greater activity of the Local Boards of Health in suppressing outbreaks; secondly, to the seasonal influences peculiar to the year 1898; but especially to the greatly increased use by physicians of antitoxin, both in a curative and a preventive way. Comparisons with other states and countries have been made in previous tables, but the following reductions in deaths since 1884 in the various cities will especially illustrate the decrease due to the last cause, since the use of antitoxin in America only began with 1895, while in France and Germany it was much used in 1894:—

City.	1894.	1895.	1896.	1897.	1898.
New York	2,258	1,634	1,555	1,377	992
Boston	817	588	516	411	170
Chicago	841	1,775	955	702	622
Paris, France	1,109	421	444	298	259
Cities of Massachusetts, including Boston (pop. 1,611,780)	1,376	1,484	1,348	1,107	507
Berlin, Germany	1,361	934	515	507	508
London, Eng	2,670	2,316	2,683	2,263	1,772
Toronto	110	147	132	161	63
Hamilton	72	11	14	19	22
Ottawa	124	78	41	44	32
London	48	9	10	20	11
Kingston	5	26	21	12	3
Brantford	10	18	10	8	2
St. Thomas	1	8	19	12	3
Chatham	12	5	4	1	2

TUBERCULOSIS.—This disease shows a total of 3,291, as compared with 3,154 in 1897 or a death rate per 1,000 of 1.4.

As was stated in the report of 1897, the total deaths had then for the first time exceeded 3,000, and it was pointed out that a certain increase had been caused by placing atrophy and other wasting diseases of infancy under tuberculosis. The total deaths from tuberculosis or any of these found in the special tables under 10 years, is 587, so that there seems no doubt but that the total deaths from tuberculosis have increased. Indeed the monthly returns for 1899 gave for phthisis alone, 2,315 for a population of 97 per cent. of the whole Province.

Deaths from Consumption by age periods, Counties, 1898.

Counties.	Males.	Females.	Under 10	10-19	20-29	30-39	40-48	50-59	60-69	Over 70	Totals.
Algoma	14	13	3	4	9	5	2	2	2	....	27
Brant	20	21	10	6	8	5	4	2	3	3	41
Bruce	42	40	11	12	22	19	3	6	6	3	82
Carleton	99	105	32	29	67	42	13	11	9	1	204
Dufferin	14	14	5	1	10	4	3	2	2	1	28
Elgin	28	30	6	8	17	8	6	9	2	1	58
Essex	27	48	12	10	19	9	14	7	3	1	75
Frontenac	44	48	8	6	23	26	13	6	8	2	92
Grey	39	51	10	8	28	23	9	8	4	....	90
Haldimand	9	16	2	5	3	4	5	2	3	1	25
Halton	12	12	6	1	10	2	3	....	1	1	24
Haliburton	4	3	1	....	....	2	4	....	....	....	7
Hastings	32	46	8	12	18	12	12	6	6	4	78
Huron	32	45	15	6	22	16	7	5	5	1	77
Kent	40	48	10	14	26	20	10	3	3	2	88
Lambton	32	30	6	3	19	13	10	4	4	3	62
Lanark	30	31	8	4	23	9	5	7	2	3	61
Leeds and Grenville	63	69	20	20	33	24	14	15	3	3	132
Lennox and Addington	19	19	7	5	12	7	3	3	....	1	38
Lincoln	25	22	6	4	11	13	5	2	4	2	47
Middlesex	69	66	28	17	34	19	14	13	7	3	135
Muskoka	10	9	3	2	6	6	1	1	....	....	19
Nipissing	10	13	6	4	5	1	4	1	2	....	23
Norfolk	13	23	8	3	9	9	....	2	2	2	36
Northumberland & Durham	47	50	21	7	30	18	12	6	3	....	97
Ontario	30	37	11	7	19	15	6	5	2	2	67
Oxford	37	35	9	7	21	13	9	5	8	....	72
Parry Sound	15	17	6	4	6	4	4	4	2	2	32
Peel	13	22	3	4	8	4	10	3	1	2	35
Perth	50	46	17	5	27	17	13	9	7	1	96
Peterboro	37	32	13	8	19	11	9	1	5	3	69
Prescott and Russell	26	33	6	8	24	5	5	3	4	4	59
Prince Edward	10	14	1	5	4	5	5	2	2	....	24
Rainy River	4	11	5	2	3	....	4	....	1	....	15
Renfrew	14	34	1	17	10	13	3	1	2	1	48
Simcoe	36	69	9	13	36	23	15	3	3	3	105
Stormont, D. and G.	47	69	10	14	39	22	15	5	7	4	116
Thunder Bay	5	2	....	1	3	....	2	....	1	....	7
Victoria	20	30	8	10	11	10	3	2	4	2	50
Welland	22	14	7	6	5	8	5	3	1	1	36
Waterloo	21	32	13	5	12	5	10	5	2	1	53
Wellington	33	34	10	7	17	13	8	1	7	4	67
Wentworth	71	60	32	13	34	29	15	5	7	5	140
York	278	276	174	53	123	96	56	29	15	8	554
	1,543	1,748	587	330	885	609	373	209	166	82	3,291

The distribution of the disease by counties illustrates a peculiarity of phthisis, viz., that it shows, owing to its widespread and chronic character, both the great permanency of local conditions, such as undrained soils and old houses where previous cases have been, as well as the continued residence of the same families in the old-settled fertile agricultural sections of the Province, members of which may have

previously have died of the disease. This may be illustrated by the following table, giving the deaths for ten years in the County of Huron, in which the numbers of persons dying, having the same family name are set by number.

Total deaths in Huron County from Tuberculosis in 1889-1898—633.

Total family names occurring more than once, 115 or 18.1 per cent.

Total persons dying whose names are those which occurred more than once, 208 or 47 per cent.

Total times repeated names occur on average, 2.6.

Family names repeated :—

60	names	twice.
25	"	three.
10	"	four.
2	"	five.
6	"	six.
1	"	eight.
1	"	nine.

This is evidence next in value to an actual house to house census, such as that made in New York City in 1886; a kind of evidence of supreme value in estimating the causes of the increase of the disease.

That it is in the more newly settled areas of the Province that the lower mortality prevails, due probably to the causes indicated above, is seen roughly in the following table giving by census years the mortality in several groups of counties in the Province.

Table showing deaths from Tuberculosis in certain Counties in 1871 and 1898, with Population, illustrating periods of permanent settlement.

County.	Year.	Population.	Death rate.
Brant	1871	32,259	1.0
	1898	39,109	1.0
Welland	1871	25,761	1.5
	1898	32,369	1.1
Leeds and Grenville	1871	57,918	1.22
	1898	65,339	2.0
Prince Edward.....	1871	20,336	1.0
	1898	20,265	1.2
Huron	1871	66,165	0.54
	1898	91,064	1.0
Bruce	1871	48,515	0.20
	1898	69,328	1.2
Simcoe	1871	61,218	0.40
	1898	76,974	1.4
Waterloo	1871	40,251	1.5
	1898	54,168	1.0
Oxford	1871	48,247	0.93
	1898	58,493	1.35
Middlesex	1871	82,595	0.6
	1898	109,417	1.25
Norfolk	1871	30,763	1.20
	1898	33,256	1.10

DEATHS IN CITIES.—The total deaths in the cities from tuberculosis are seen in the following table to have increased in absolute numbers during the ten year period by 40 per cent. Whether this represents an actual increase depends, however, on the relative completeness of returns in the earlier years of the period, with the inclusion of deaths under one year in the returns for 1898. An additional allowance must be made for an increased population, estimated at 25.6 per cent in the ten years.

Deaths from Tuberculosis by Cities, 1889 to 1898.

	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
Toronto	303	387	490	477	512	442	430	442	467	483
Hamilton	80	88	90	73	88	80	104	100	83	109
Ottawa	102	106	53	80	111	98	91	109	134	148
London	27	38	52	43	42	54	51	61	52	64
Kingston	51	39	42	39	35	33	27	41	54	45
Brantford	18	15	22	26	32	19	26	31	25	23
St. Thomas	11	12	15	13	9	12	15	19	17	13
Guelph	11	8	10	16	23	17	15	15	14	21
S0. Catharines	26	27	12	27	18	23	21	17	15	21
Bellevoile	25	16	14	25	17	13	24	11	20	15
Stratford	15	16	8	9	11	16	8	12	13	19
Windsor	16	16	28	13	17	21	21	21	17	23
Chatham	16	22	17	11	14	13	7	18	12	14
Total	701	790	792	852	929	841	840	897	923	998

There certainly has been no decrease in Ontario such as has marked the cities of Great Britain during the past thirty years, which have made in spite of their enormous populations, such great advances in the problem of the housing of the poorer classes. As yet no systematic steps have been taken by local boards in the cities of Ontario to maintain a supervision of houses where consumptives are resident, nor to disinfect the premises after death.

DEATHS FROM TUBERCULOSIS BY OCCUPATIONS.—An attempt has been made to classify, with all the accuracy possible, the deaths from consumption by occupations in counties. (See table 16, p. 48).

The table is of further interest as showing the distribution of population in different counties varying greatly in its proportions in urban and rural districts. A glance at the table makes it at once plain that a number of occupations, or persons in certain social positions in life, supply a large proportion of the deaths.

That there are notable variations in the distribution of population as regards both age and sex in different municipalities, may be illustrated by the following, showing the number of deaths by age and sex in Huron county in 1898. The returns show 72 deaths due to tuberculosis, and arranged as above, they are:

Age	(Under 10)	(10-19)	(20-29)	(30-39)	(40-49)	(50-59)	(60-70)	Total.
Male.	1	4	5	5	4	3	4	26
Female.	3	9	17	9	3	3	2	46

The first notable fact here seen is that there are practically two deaths of females for every one male. Further, the preponderance of females beginning in the 10-14 year period, is maintained until child-bearing has practically ceased at 40 years. Making due allowance for the migration from a county largely rural of a portion of the male population, there would seem, however, to exist some other specially potent cause, such as more constant indoor life, possib'y in an already infected house, to account for this relatively great preponderance of female deaths. In table 16 it will be further seen that the second largest total is that of farmers, 354—the largest being that of housewives, 693. If from the class of housewives we select an equal number of deaths of females as of males belonging to the farming class, we have 708, or more than 21 per cent. of the total deaths are farmers or farmers' wives. Hence, taking a probable estimate of the number of farmers and farmers' wives in Ontario, the rate in this class stands high, being probably nearly 1.5 per 1,000. Under the class children, there are 471 deaths, and allowing for a proportion of those with occupations not given, this will include those set down in the table according to ages as dying up to ten years, or 587 in all. The next highest class is that of laborers, the deaths being 193. Under the heading of spinsters is necessarily classed a large number of women of marriageable age; since in the table by ages the total deaths between 20 and 40 are 1,494, which includes persons of both sexes, married and single. A further proportion are included in the period between 15 and 20 years. The next highest class is servants, being 51, most of whom are naturally females. Of the large class under the heading of clerks, there appear 45 deaths, which is, however, almost equalled by students, their number being 42. Pro-

portionately to their total number, the deaths in this class with sedentary lives would appear highest of all.

Amongst the occupations of those showing relatively the highest mortality, are those of school teachers and painters. The total teachers in the public and separate schools of Ontario was in 1899, 9,209, so that the death rate is 2.17 per 1,000. Remembering the chronic nature of this disease and the fact that many teachers continue at their duty for months while in failing health, we see that such a mortality has a direct bearing upon the health of the school children.

The figures are not available regarding the total printers employed in Ontario, but the fact would appear that 20 of a mortality is very large compared with most other occupations for the number employed. Perhaps, however, the mortality amongst barbers is even greater proportionately to the number employed, there being 16 in all. The fact of this class, like teachers, coming into close contact with other persons, and handling cutting tools which may be infected from sputum, while, as often is the case, many abrasions of the skin are made by them, becomes so important a matter as would seem to demand some method of dealing with the danger.

Tabular Statement of Returns and of Correspondence in 1899.

Receipt of schedules containing Annual Records and certificates for same	750 Division Registrars. 27 District Registrars.
Returns for 1898, indexed and compared.....	Births, 46,599 Marriages, 30,750 Deaths, 26,370
Receipt and filing of Marriage Licenses	13,990
Issued to Division Registrars :	
Blanks for returns, Forms A, B, C	
Form B (Burial Permits)	
Form D (For Licenses)	
Blanks for Cemetery Returns	194,500
Permits, by letter, to register Marriages, not received in former years.....	137 { B, 77 M, 58 D, 2
Application for Searches of Records for Births.....	355
Marriages	113
Deaths	377
Certificates issued for Record— Births.....	169
Marriages	74
Deaths	157
Total fees received for 755 searches	\$188.75
400 certificates	\$200.00
Registration in Supplementary Index of returns not previously recorded in their proper year	Births, 1,253 Marriages, 305 Deaths, 56
Comparison of Marriage License Returns received with Marriages recorded by local registrars.....	12,153
Marriages (for which license was issued) not found in the municipality where license was issued.....	1,980
" " found registered in other municipality.....	1,490
" of persons (3 per cent. of whole) found by correspondence.....	980
Number of letters received and filed in 1899	1,902
" written, sent out and filed	1,358
Comparison (not previously made at time of indexing) of indexes with Schedules for parts of 1889-1890.....	79,022
All of which is respectfully submitted.	

PETER H. BRYCE,
Deputy Registrar-General.

Inspector's Report.

TORONTO, January 2nd, 1900.

TO THE HONOURABLE J. R. STRATTON

Registrar General of Ontario:

SIR,—I have the honor to report that during the past year I visited for purposes of inspection the Division Registrars of municipalities within the counties and districts of Algoma, Frontenac, Halton, Hastings, Huron, Lennox, Lincoln, Leeds & Grenville, Middlesex, Muskoka, Northumberland & Durham, Nipissing, Parry Sound, Thunder Bay, Rainy River, Peel, Perth, Simcoe, Stormont, Wentworth and York. The following summary of a number of places visited will give a fair idea of how the Registration Act is carried into effect throughout the Province.

In the City of London I find the physicians make scarcely any pretence of registering births, and few of them even obtain the cards necessary for the purpose from the Division Registrar. The returns are almost invariably made personally by some member of the household, and it is clear that many births take place which are not reported at all. In marriages the returns appear to be pretty complete, as the clergymen of the city as a rule are very careful in making their reports. As to deaths, the Division Registrar assures me he is satisfied he gets practically all the returns, but the death rate is so low that I question very much whether his opinion is correct.

The physicians are fairly good in sending reports of deaths to the Division Registrar, but scarcely ever to the Medical Health Officer, as the Act calls upon them to do. Undertakers claim to be very careful in refusing to bury without the necessary permit, but some caretakers of cemeteries will inter the body without even asking for the burial permit. London is typical of a great many municipalities in Ontario. The registers are well kept, the records are sent to this Department in excellent form and at regular stated intervals, and the Registrar is most anxious to have his returns as full as possible not only for the credit of the thing but that the fees may bring him a larger gratuity, but yet it is a self evident fact that the returns are not nearly complete. We now take the city of Stratford, and here I regret to say I cannot even compliment the Registrar upon the mechanical portion of his work, as his returns are not sent in until long after the close of each year; while as to births, which were recorded in 1898 as 159, I found by an actual canvass among the medical practitioners that they amounted to at least 90 more, and consequently the low birth rate of 15 per 1,000 as shown in the schedule was increased to at least 24. Here again the physicians have in the past given no help to the Registrar, but all of them have agreed to endeavor to carry out the Act in the future. Next year's report will tell how these promises have been kept. I am pleased to be able to state that, from information received from the undertakers, I find the number of deaths recorded are pretty nearly correct, which fact goes to prove that Stratford must be a very healthy city.

In St. Catharines we find the same trouble in regard to birth records, few of the physicians making any returns whatever, while I have every reason to believe that the death returns are as complete as they can be made. The Registrar is a most pains-taking official, and yet we have the anomaly of his returns showing frequently a larger number of deaths than births.

In Hamilton, although the physicians again fail to make returns of births to any great extent, we find the birth rate to be a fairly large one, and in fact all the records seem to be pretty complete, as the Registrar appears to have the citizens well in hand in this respect, and they seem to have got into the right swing.

In Kingston the deaths appear to be very complete, but it is quite evident the births are not nearly all recorded, and here again a great many of the physicians appear to be utterly oblivious of the fact that upon them devolves the duty of making returns. The Division Registrar however reports a great improvement in this respect.

In the Town of Cornwall registration matters appear to be on a very satisfactory basis, and I am convinced the records are practically perfect, the ratio being high both in

births and deaths. Of course there being a considerable French-Canadian element among the population will account to some extent for this, but the Division Registrar has given a great deal of attention to the work, and has imbued all classes of the community, even the physicians, with the idea that the Registration Act is a reality and that its provisions should be carried out as fully as possible, and consequently his returns are thoroughly reliable.

In Brockville much the same result is obtained by the same means. The Division Registrar uses every means in his power to get complete returns, and his earnest endeavors in this respect meet with a ready response.

In these last two towns the physicians render very great assistance to the Registrars, and consequently much fuller returns are obtained. In the neighboring town of Gananoque the reverse is the case, and the almost inevitable result follows: viz., much smaller returns.

We will now take a few towns in the north-western and northern districts of old Ontario, beginning with Goderich, where the Division Registrar states that "the Doctors do not report births," and the result is the returns are very low, being only 14 per 1,000 population. On the contrary they are particular in making death returns, and we find the ratio in this respect has increased in two years from 7.5 to 11.5. In Clinton much the same state of affairs exist, and the birth rate is stationary at 16 per 1,000 while the death rate is 11.5.

In Blyth the birth rate has fallen from 20 in 1896 to 10 in 1898, the death rate having in the meantime gone up from 8.5 to 10.

In Orillia town again we have the old story of no birth returns from physicians, and a decrease from 17.5 to 14 is recorded in two years, the death returns being much smaller than they should be as well.

In the rural municipalities, even to a greater extent than in the towns, much depends upon the individuality of the Division Registrar whether the returns are to be large or small, consequently the discrepancies between the different returns are very noticeable. In Pittsburgh township the birth rate is fairly high, being above 24 per 1000, while in Kingston township, immediately adjoining, the records show only 12.5. It seems scarcely possible that such a great difference should actually exist where the circumstances are so nearly alike. The death rate is practically the same in each municipality, being 14 in Kingston and 14.5 in Pittsburgh, which I should judge in both cases is pretty nearly correct.

In Caledon township the birth rate is low, being only 16 per thousand, though the Division Registrar thinks he gets nearly all the records; but his death returns show only 6.5 per 1,000, which is probably not one half of the actual occurrences. The fact of there being seven burying grounds in the township without caretakers probably accounts for many burials taking place without permits being obtained. This shows one of the many difficulties in the way of complete registration returns.

In Huron county East Wawanosh township shows the birth records to be 32.5 per 1000 in 1896 and 28 in 1898, while Morris township only claims 18.5 in the former year and 14 in the latter, evidently away under the actual reality. The deaths in both cases show an average of about 10.5, which, after careful enquiry, I am inclined to accept as about correct, as the returns from all the townships in that part of the country indicate a low death rate throughout the district.

In the newly settled parts of the Province known as New Ontario the returns are considerably higher than in the older sections, especially in respect to the birth records; but I have no reason to think that it is on account of more complete registration. Wherever the French-Canadian element is much in evidence, and this is the case throughout Nipissing, Algoma, Thunder Bay and Rainy River Districts, the birth rate is invariably large. A few instances will suffice to show the truth of this statement. In Balfour township for 1898 the births returns showed 60 per thousand, in Hallam 50, in Salter and Wray 50, in Nairn and Hyman 60, in Rayside 40, in Bonfield 50, in Caldwell 50, in Ferris 50, in Mattawa 50, in McKim 50, in North Bay 50, in Papineau 40, in Springer 50, in Sturgeon Falls 50, and in Sudbury 50. Were it not for these high figures and the returns from Essex and Prescott and Russell counties the birth rate of the Province would indeed appear very small. Among the other municipalities in-

spected were the following, viz: Toronto, Cobourg, Port Hope, Belleville, Napanee, Hope Township, North Fredericksburgh, Brampton, Sault Ste. Marie, Wingham, Orillia Township, Oro, Gravenhurst, Machar, Lount, Laurier, Port Arthur, Fort William, Oliver, McIrvine, Alberton, Rat Portage, Keewatin, Turnberry, Wroxeter, Day Mills, Neebing, Schrieber, Mikado Mine, Regina Mine, Wabigoon, Dryden, Van Horne, Burlington, Toronto Junction, Weston, North Toronto and Etobicoke.

The following table shewing the birth and death returns from a few municipalities in each county of the Province, for the years 1893, '96 and '98 is well worthy of perusal as the eccentricities apparent upon its face, give a pretty fair indication that a great improvement must be made before our vital statistics can be looked upon as at all reliable.

	Births per 1,000.			Deaths per 1,000.		
	1893.	1896.	1898.	1893.	1896.	1898.
BRANT.—Oakland	19.	14.	10.	20.	4.	10.
Brantford	22.5	20.5	23.	15.5	16.	13.
BRUCE.—Eastnor Tp	33.	45.	31.	5.5	17.	6.5
Walkerton	23.	21.	12.	14.5	10.	12.
Paisley	24.5	15.	8.	13.5	10.	5.
CARLETON.—Gloucester	38.	36.	33.	21.	17.5	21.
Gower, North	6.5	13.	9.	2.5	7.5	12.5
Huntley	9.	31.	21.	3.	11.	9.
Hintonburg	—	54.	50.	—	25.	20.
DUFFERIN.—Garafraxa, E..	34.	20.	17.	11.	10.	8.
Orangeville	10.5	12.	9.5	13.	9.	8.5
Shelburne	23.	21.	25.	9.	15.	16.
EGLINTON.—Dorchester, S..	24.	23.5	18.	16.	8.5	9.
Dunwich	11.	11.	19.	5.5	8.5	16.
Aldborough	18.	18.	18.	9.5	7.	8.5
ESSEX.—Rochester	45.	46.	37.	16.	23.	17.
Windsor	30.	22.5	19.	18.5	14.5	13.
Essex	15.	17.	17.5	6.	12.	11.
FRONTENAC.—Bedford	33.	20.5	33.	15.	18.5	11.5
Kingston	18.	12.5	12.	6.5	12.5	14.
Storrington	13.5	25.	8.	8.	12.	9.
GREY.—Derby	27.	20.	25.	20.	14.	16.
Proton	33.	28.	32.	13.	8.	10.5
Collingwood Tp	13.	8.5	11.	4.5	8.5	10.
HALDIMAND.—Rainham	27.	25.	25.	7.5	10.	15.
Dunn	20.	15.	14.5	7.5	1.	20.
Cayuga	28.	22.	15.	20.	9.	6.
HALTON.—Milton	30.	25.	20.5	10.	16.	13.
Georgetown	14.5	22.	18.	8.	10.	13.
Oakville	22.5	15.5	20.5	11.	12.5	10.5
HASTINGS.—Madoc	8.	12.	8.	2.5	5.	3.
Monteagle	37.	40.	38.	7.	11.	9.5
Belleville	14.	13.5	16.5	15.	15.	15.5
Deseronto	26.	23.	35.5	10.	9.	12.5
HURON.—Hullett	26.	24.	22.	13.	8.	10.
Ashfield	24.	25.	16.	5.5	10.	10.
Goderich	14.	13.5	14.	5.5	7.5	11.5
KENT.—Dover	36.	38.	36.	11.	10.5	14.5
Chatham	8.5	19.5	21.	4.5	9.6	11.5
Blenheim	25.	22.5	14.5	19.	9.	16.5

	Births per 1,000			Deaths per 1,000.		
	1893.	1896.	1898.	1893.	1896.	1898.
LAMBTON.—Euphemia	28.	18.5	19.	14.	5.	9.5
Sombra	12.	25.	20.5	6.	7.	22.
Watford	32.	20.5	18.	21.	16.	8
LENNOX.—Sheffield	30.	28.	21.	15.	12.5	16.
Richmond	5.5	13.	19.	6.	11.	16.
Fredericksburg, S	9.	10.	7.5	4.	8.5	8.5
LINCOLN.—Caistor	26.	26.5	21.	9.	12.5	12.
St. Catharines	13.	16.	16.	17.5	13.5	17.
Niagara	18.5	15.5	20.5	7.	7.5	6.5
LANARK.—Lanark	30.	27.5	30.	15.	19.	9.
Smith's Falls	13.	12.	14.	2.5	7.	15.5
Montague	1.	13.	12.5	1.5	5.	10.5
LEEDS.—Crosby, N	25.	25.	38.	10.	10.5	15.5
Oxford	8.	19.5	15.	5.5	17.5	11.5
Gananoque	12.5	15.	17.5	3.	8.	11.
Elmsley, S	15.5	15.	18.	11.	2.5	10.
MIDDLESEX.—Dorchester, N	24.	24.5	26.5	11.	12.5	14.
Westminster	17.	11.5	13.5	11.5	9.	9.
Metcalfe	15.5	18.	23.5	7.	7.	3.
NORFOLK.—Houghton	21.	31.	29.	13.	16.	13.
Townsend	21.	20.	17.	7.	10.	9.
NORTHUMB'LAND.—Alnwick	33.	30.	33.5	20.	18.	19.5
Cavan	11.5	23.5	13.	7.5	6.5	9.
Campbellford	19.	16.5	21.5	2.	10.5	13.
Monaghan, S	24.	25.	41.	15.	5.	22.
ONTARIO.—Rama	35.	35.	30.	19.5	15.	20.
Mara	9.	17.	14.5	4.	11.5	7.
OXFORD.—Blandford	28.	20.	23.	14.	10.	15.
Oxford, N	12.	22.5	18.5	15.	15.	7.5
PEEL.—Caledon	21.	16.	16.5	4.	6.5	6.5
Streetsville	25.	25.	12.	15.	15.	15.
PERTH.—Ellice	27.5	20.5	20.	12.5	8.	15.5
Blanshard	8.5	12.5	19.5	5.5	6.5	6.5
Mitchell	25	24.5	18.	9.	12.5	21.
PREScott.—Alfred	46.	45.	52.	22.	20.5	16.5
Caledonia	10.5	27.	25.	5.5	7.5	14.5
Hawkesbury	46.	14.	35.	11.	7.	17.5
L'Orignal	nil	17.	23.	3.	8.5	4.
PETERBOROUGH.—Belmont	12.5	21.	32.5	5.	9.5	15.
Harvey	34.	40.	22.	7.5	5.	12.
PRINCE EDWARD.—Athol	27.	17.5	16.	12.	17.5	11.5
Sophiasburgh	16.	22.	21.	7.	17.5	11.
Marysburgh, N	15.5	17.5	10.	15.	7.5	10.
RENFREW.—Hagarty	40.5	21.5	22.5	17.5	6.5	8.
Arnprior	18.	40.	38.	9.5	16.5	13.5
Westmeath	17.	19.	15.	17.5	3.	5.5
SIMCOE.—Medonte	34.	31.5	33.	9.	7.5	7.
Essa	8.	14.	7.5	3.5	7.5	8.5
Adjala	7.	4.	12.5	6.	4.	7.
STORMONT.—Winchester	30.	31.5	25.	13.	13.	11.
Lancaster	7.	18.5	13.	2.5	6.	8.5
Cornwall	24.	36.	30.	17.	17.5	19.
Ircquois	4.	10.	8.5	5.	5.	20.

	Births per 1,000.			Deaths per 1,000.		
	1893.	1896.	1898.	1893.	1896.	1893.
VICTORIA.—Mariposa	26.	25.	28.5	14.	17.5	14.
Emily	5.5	11.	12.	8.5	13.	10.5
WELLAND.—Bertie	29.	20.	18.	7.5	8.5	12.
Pelham	14.5	18.5	15.	11.	11.	13.
Welland	22.5	15.	16.5	13.	6.5	14.5
WATERLOO.—Woolwich	35.	30.	29.	9.	13.	7.5
Dumfries, N..	21.5	21.	20.	6.5	7.	8.5
Berlin	28.5	22.5	24.	13.5	13.5	13.5
Galt	23.	18	15.5	10.5	9.5	13.
WELLINGTON—Garafraxa, W	28.	26.5	38.	13.5	7.	10.5
Arthur	16.	10.	10.	3.	11.	7.
Luther, W..	21.5	29.	23.5	8.5	2.5	8.
WENTWORTH.—Ancaster	25.	26.	23.	16.	11.5	11.5
Hamilton	23.5	22.5	22.	15.	14.5	15.
Flamborough, E	22.5	26.	20.	10.5	7.	12.
YORK.—Etobicoke	29.	25.5	21.	18.5	16	19.
Richmond Hill....	8.	16	20.	2.	14.	9.5
Aurora	19.	11.5	14.5	10.	10.5	10.
Whitchurch	24.	25.	22.	10.	8.	5.

I include no returns from any of the outlying districts in the foregoing summary, but confine myself to those portions of the Province where the Registration Act has been in force for a period of nearly a third of a century, and yet we find within the past six or seven years such a glorious irregularity attached to these returns that they are practically rendered useless as a basis of calculation. The birthrate, it will be seen, runs from 54 per thousand to actually nothing, while the death rate shows 26 as the highest and 1 as the lowest. Of course no fair comparison can be made between what might be termed the "extreme sections" of the Province as both the births and deaths actually taking place are much greater in some places than in others, but in the following municipalities a retrograde movement to an alarming extent seems to have set in. In Nepean township the recorded death rate has fallen from 26 to 10; in Paisley village the birthrate from 24.5 to 8, the death rate from 13.5 to 5; in Walkerton town the birthrate from 23 to 12; in Eastnor township the birth rate from 45 to 31, the deathrate from 17 to 5.5; in Oakland township the birth rate from 19 to 10, the deathrate from 20 to 10; in Storrington township the birth rate from 25 to 8; in Cayuga village the birthrate from 28 to 15, the death rate from 20 to 6; in Watford town the birthrate from 32 to 18, the deathrate from 21 to 8; in Blenheim town the birth rate from 25 to 14.5, the death rate from 19 to 9; in Ashfield township the birth rate from 25 to 16; in Turnberry township the deathrate from 16.5 to 8; in Lanark township the deathrate from 19 to 9; in Streetsville village the birth rate from 25 to 12; in Oxford North township the death rate from 15 to 7.5; in Westmeath township the death rate from 17.5 to 3; in Bertie township the birth rate from 29 to 18; in Hagarty township the birth rate from 40.5 to 21.5, the death rate from 17.5 to 6.5; in Athol township the birth rate from 27 to 16; in Galt town the birth rate from 23 to 15.5; in Arthur village the birth rate from 16 to 10; in Etobicoke township the birth rate from 29 to 21. In a few instances I am pleased to say a steady improvement is noticeable, but on the whole what strikes the observer most forcibly is the great uncertainty which pervades the returns from year to year, they may be pretty nearly correct or they may be so far astray that "he who runs may read" how wide of the mark they actually are. The birth rate of old Ontario is certainly a low one at best, but from careful observation I am inclined to think that fully 25 per cent. may be added to the recorded returns throughout the whole Province in order to make them approximately correct. As to death returns in many localities they are so nearly complete that probably

an addition of fifteen per cent. to the total number received by the Department would bring the records up to the actual reality. In regard to marriage returns I have little complaint to make as it would appear they are pretty fully recorded in every section of the Province. After an experience of nearly four years with the amended Registration Act I regret to say that the hopes expressed in my report of 1896 "that before the closing years of this century the vital statistics of Ontario will be very reliable and pretty near complete" has by no means been gratified. For a couple of years immediately succeeding the passing of the amended act a great improvement was noticeable in nearly every respect, so that I felt satisfied the problem of complete registration was shortly about to be solved. But the efforts of the Division Registrars as far as *quantity* is concerned seems to have been of a spasmodic nature, as the returns which in 1897 reached high water mark fell off lamentably, excepting in marriages; in the following year, and from present indications I fear that when all the schedules are received for 1899 a still further shrinkage will be noticeable in the birthrate. To a certain extent this is accounted for by the fact that for some little time after the passing of the amended act there was a tendency to register births and deaths which had occurred some years previously and had not been registered up to that time, but this would not mean one-half of the decrease shown in 1898. It would seem that the very fact of the publicity given to the question of vital statistics by the discussion upon the amendments to the act had for a time a most beneficial effect, and had awakened the people to the necessity of making returns, but alas that awakening was of short duration and they appear to have fallen into a still deeper sleep. As far as the clerical work is concerned I am pleased to note a steady improvement on the part of the Division Registrars and comparatively few schedules have now to be sent back for correction.

In looking for reasons for the defective registration of births and deaths several very cogent ones present themselves. In the first place we know that "what is everybody's business is nobody's business," and when the ordinary citizen learns the number of people who are called upon to see that the proper registration is made he is apt to decide to "leave it to the other fellow." As a matter of fact householders have frequently told me that they thought that the doctor was sure to make the return, while physicians, almost to a man, feel certain the record will be made by the householder.

In marriages the clergyman alone is made responsible for the proper information being given, and these records are certainly by all odds the most satisfactory obtained by the department.

It is probably necessary that more than one party should be called upon to see that births and deaths are registered, but at the same time that very fact is certainly one of the obstacles in the way of complete returns. Then we find that the quarter from which we can and should receive the greatest assistance is practically of no use to us whatever.

It is with regret that year after year I have been forced to report that the physicians scarcely give any assistance to the Division Registrars in regard to birth and death returns. Whatever the profession as a body may understand of the Act it is clear that individually very few medical practitioners feel themselves bound by any of its provisions. After nearly four years existence of the section making it imperative for "every qualified medical practitioner attending at the birth of any child born within this Province to give notice forthwith thereof to the Registrar of the Division in which the child was born," We find it is observed chiefly in its breach, and many doctors are not aware to-day that such a section is in the Act. An equally strong paragraph relating to their duties in connection with the registration of deaths is also ignored to a great extent throughout the Province. Referring to the physicians in this connection in my report of 1891 I then stated: "I regret to say that as a rule they simply do not do their duty, and when such an intelligent and highly educated class fails to carry out the law it can scarcely be expected that 'the masses' will comply with it in every respect." What was true then is unfortunately almost equally true to-day. Educating the profession to do work in which they take such little interest makes slow progress in Ontario.

We will now consider the position of the Division Registrar which as the Act provides is filled by the Clerk of each municipality. I desire to again place on record my opinion that as a rule these officials are active and intelligent men who are painstaking

and energetic in their capacity as *Municipal Clerks*, but they are with few exceptions very much underpaid for the work they are called upon to do. It is surprising to learn even in comparatively wealthy municipalities how meagre their salary really is, while in many of the smaller townships they receive a mere pittance for work that certainly is of considerable importance. Under these circumstances these gentlemen do not feel very much like devoting time or attention to the duty of collecting vital statistics. In cities and towns their time is principally taken up with their municipal work, while in townships the area is so great which they have to attend to that it is a most difficult matter to secure complete returns. Then again, the work connected with the Registration Act is of an *ex officio* nature; the registrar is not appointed by this Department, and consequently there is a feeling among many of them that they cannot be held responsible for work which is outside of their regular duties.

Taking all these matters in consideration is it any wonder we find that so many Division Registrars are quite satisfied with the returns that come to them in the ordinary course of events, and think they have done their full duty when they record these returns and send their schedules to this department once every six months. The Registrar General may not be satisfied with the *extent* of the returns made, but what is he to do? The Division Registrar states he has used "all available means to obtain the necessary information," as called upon to do by the Act. He cannot be expected to go to any great expense in obtaining such information and his statement that he "has used all available means" must be accepted. He is a *municipal clerk*, not a *government official*. Were he the latter, while the returns might yet be far from complete, they certainly would not display the great discrepancies shown in the table of comparisons attached to this report.

I have the honor to be, Sir,

Your obedient servant,

R. B. HAMILTON,

Inspector.

TABLE 1.

Table showing the total number of Births, Marriages and Deaths in each County in 1898.

Counties.	Population.	Number in 1898.	Births.	Marriages.	Deaths.	Totals.		Ratio to 1,000 of the population.	
						Variation from 1897.		Variation from 1897.	
						Increase.	Decrease.	Increase.	Decrease.
Algoma	17,810	817	89	31	250	... ...	... ...	1,262	151
Brant	39,109	702	69	29	440	... ...	... ...	1,403	71
Bruce	69,328	1,310	157	370	601	... ...	... ...	2,281	233
Carleton	83,298	2,183	96	1	1,650	... ...	... ...	4,494	70
Dufferin	23,868	449	1	152	24	... ...	... ...	831	54
Elgin	46,547	763	38	268	36	477	... ...	1,508	105
F.sex	59,607	1,607	42	1,117	147	737	... ...	3,461	170
Frontenac	50,447	919	2	290	53	705	13	1,914	... ...
Grey	76,423	1,426	55	405	55	754	35	2,585	38
Haldimand	25,162	403	12	148	15	248	15	799	42
Halton	28,590	410	10	84	21	223	8	717	23
Haliburton	6,800	222	8	33	1	65	11	320	18
Hastings	63,508	1,202	24	448	21	689	... ...	2,339	31
Huron	71,664	1,273	3	380	63	658	89	2,316	149
Kent	62,991	1,313	89	422	12	731	2	2,466	99
Lambton	58,911	1,170	61	398	23	675	... ...	2,143	143
Leeds and Grenville	40,482	738	9	272	51	465	10	1,480	32
Lennox and Addington	65,349	1,062	60	402	59	823	10	2,287	109
Lincoln	26,537	467	14	183	17	302	... ...	962	2
Middlesex	32,278	560	56	164	38	405	... ...	1,129	151
Muskoka	109,417	1,616	50	615	89	1,039	... ...	3,329	102
Nipissing	17,782	601	1	108	29	196	5	905	33
Northumberland and Durham	12,636	897	69	167	6	259	... ...	1,322	110
Ontario	33,256	651	17	204	33	348	62	1,193	102
Oxford	75,615	1,218	46	419	21	877	9	2,514	68
	48,671	854	36	257	22	503	6	1,614	33
	53,493	1,073	36	332	10	615	10	2,02	16

TABLE 2.

Table showing the total number of Births, Marriages and Deaths in each City in 1898.

TABLE 3.

Table showing the total number of Births, Marriages and Deaths in each Town in 1898.

Towns.	Births.		Marriages.		Deaths.		Totals.		Ratio to 1000 of Population.	
	Population.		Variation from 1897.		Variation from 1897.		Variation from 1897.		Marriages.	
	Number in 1898.		Decrease.		Increase.		Decrease.		Decrease.	
Barrie.....	6,166	92	43	57	3	80	4	229	14.9	12.9
Brockville.....	9,419	180	22	77	8	160	29	417	19.0	8.1
Berlin.....	7,965	206	6	72	36	113	2	391	40	25.8
Bracebridge.....	1,575	69	12	26	14	23	10	118	16	9.0
Brampton.....	3,612	42	1	26	11	41	16	169	28	16.5
Cornwall.....	7,299	187	11	20	13	118	7	385	24	11.6
Cobourg.....	6,364	85	12	27	13	91	20	203	19	16.1
Ceynaga.....	913	17	2	7	4	7	6	31	8	15.8
Goderich.....	4,264	53	8	28	12	42	13	125	31	12.4
Lindsay.....	6,622	142	15	85	16	90	12	317	42	21.7
L'Original.....	1,113	22	1	8	1	4	6	34	4	19.7
Milton.....	1,610	29	14	11	1	18	3	58	17	11.2
Napanee.....	3,813	63	8	63	9	46	6	172	5	16.5
Niagara Falls.....	3,586	115	23	73	11	45	7	26	14	20.3
North Bay.....	2,455	114	13	31	6	31	7	176	25	32
Orangeville.....	3,290	25	10	28	5	29	2	82	17	6
Owen Sound.....	8,041	164	66	66	2	123	30	353	28	20.3
Parr Sound.....	2,636	72	42	28	1	33	14	133	55	26.7
Peterboro.....	10,630	247	24	117	14	154	1	518	9	23.2
Pembroke.....	4,933	141	40	49	4	66	22	233	25	11.0
Perth.....	3,488	73	15	53	17	43	15	169	66	28.6
Pierton.....	3,651	41	19	42	13	53	7	136	13	20.9
Port Arthur.....	3,654	75	5	33	9	45	7	152	2	20.5
Rat Portage.....	4,645	139	8	84	31	86	16	309	23	30.5
Sarnia.....	6,958	141	7	120	11	90	11	351	7	30.5
Sault Ste. Marie.....	3,860	119	6	43	17	44	2	206	25	17.2
Smethwick.....	2,970	57	2	33	17	40	2	135	11	30.8
Toronto Junction.....	5,202	139	10	43	7	71	2	253	1	12.9
Walkerton.....	3,400	32	25	21	16	37	1	94	24	26.7
Welland.....	3,270	32	3	28	3	28	11	76	11	8.2
Whitby.....	3,091	47	4	15	6	35	5	97	15	9.8
Woodstock.....	9,258	184	37	70	5	105	8	379	24	11.0
Total.....	148,621	3,148	137	311	1,537	131	172	1,991	132	13.4
									6,677	205

The Town of L'Original included in the above totals has been omitted from Table 12.

TABLE 4.
Illegitimate Births, Twins and Triplets in the Province.

Illegitimate Births.		Ratio to 1,000 births.	Number of pair of twins.	Number of cases of triplets.
No.	Proportion to whole number of births.			
678	One to every 68 births	14.5	306	7

TABLE 5.

Births in the Province in 1898, showing the Proportion of Male to Female Births.

Sex.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Males	1,975	1,863	2,196	2,081	2,008	1,930	2,090	2,157	2,115	1,932	1,725	1,824	23,896
Females.....	1,853	1,819	2,120	1,962	1,958	1,834	1,936	2,122	2,030	1,741	1,591	1,737	22,703
Total	3,828	3,682	4,316	4,043	3,966	3,764	4,026	4,279	4,145	3,673	3,316	3,561	46,599
Male births to 100 female births.....	106.5	102.4	103.6	106.0	102.6	105.2	107.9	101.6	104.1	110.9	108.4	105.0	105.2

TABLE 6.
Order of Births by Months in the Province.

Months.	Males.	Months.	Females.	Months.	Total males and females.
March	2,196	August	2,122	March	4,316
August	2,157	March	2,120	August	4,279
September	2,115	September	2,030	September	4,145
July	2,090	April	1,962	April	4,043
April	2,081	May	1,958	July	4,026
May	2,008	July	1,936	May	3,966
January.....	1,975	January	1,853	January	3,828
October	1,932	June	1,834	June	3,764
June	1,930	February	1,819	February	3,682
February	1,863	October	1,741	October	3,673
December	1,824	December	1,737	December	3,561
November.....	1,725	November	1,591	November	3,316
Total	23,896	Total	22,703	Total	46,599

TABLE 7.
Marriages by Months in the Province,

Months.	1897.	Months.	1898.	Quarters.	1897.	Quarters.	1898.
December	1,896	June	1,741	Quarter ending Dec. 31...	4,733	Quarter ending Dec. 31...	4,455
June	1,682	December	1,532	Quarter ending June 30...	3,577	Quarter ending June 30...	3,835
September	1,633	October	1,488	Quarter ending Sept. 30...	3,522	Quarter ending Sept. 30...	3,550
November	1,453	September	1,483	Quarter ending Mar. 31...	3,437	Quarter ending Mar. 31...	3,531
October	1,384	November	1,435	Date not given.....	24	Date not given.....	4
March	1,227	March	1,204				
January	1,147	April	1,197				
February	1,063	January	1,173				
April	989	February	1,154				
July	968	August	1,145				
August	921	July	922				
May	906	May	897				
No date given ..	24	No date given.	4				
Total	15,293	Total	15,375	Total	15,293	Total	15,378

TABLE 8.
Marriages by Denominations in the Province.

Denominations.	'Nnumber of persons married.	Per cent. of whole.	Proportion to the whole number of persons married.
Methodists	10,382	33.8	2.9
Presbyterians	6,400	20.8	4.8
Church of England	4,932	16.0	6.2
Roman Catholics	4,657	15.1	6.6
Baptists	1,908	6.2	16.1
Lutherans	723	2.3	42.5
Congregationalists	271	.9	113.4
Evangelical Association	157	.5	195.8
Mennonites	127	.4	242.1
Quakers	32	.1	960.9
Other denominations	853	2.8	36.0
No denominations given	333	1.1	91.0
Total	30,750	100.0	

TABLE 9.

Showing the Death rate per 1,000 of Population in each County of the Province for ten years.

Counties.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	Average rate for ten years.
Algoma										15.9	14.0
Brant	12.7	12.3	10.5	11.4	11.3	10.4	12.1	12.3	12.2	11.2	11.6
Bruce	7.4	7.1	8.3	8.3	8.3	8.7	7.9	9.7	9.7	8.6	8.4
Carleton	18.2	18.4	8.9	13.6	15.5	16.9	17.7	17.9	20.3	19.8	16.7
Dufferin	9.7	10.0	10.8	9.6	8.9	7.3	7.9	8.0	8.4	9.6	9.0
Elgin	9.2	9.9	9.2	9.1	9.9	8.5	10.2	10.1	11.0	10.2	9.7
Essex	12.1	12.5	12.0	12.2	11.9	11.6	12.0	12.6	12.9	12.3	12.2
Frontenac	15.9	15.7	13.7	14.5	12.4	11.1	11.2	13.3	13.8	13.9	13.5
Grey	7.0	7.3	7.4	7.7	7.7	7.8	8.1	9.7	9.5	9.8	8.2
Haldimand	8.5	6.7	8.2	10.3	6.6	9.5	8.4	7.7	10.5	9.8	8.6
Halton	8.6	8.9	9.3	9.9	9.0	8.7	8.9	9.2	9.2	9.4	9.1
Haliburton			8.0	9.2	8.6	8.2	10.7	12.4	11.2	9.5	9.7
Hastings	10.7	10.6	8.3	8.9	9.0	7.9	9.2	11.2	11.4	10.8	9.8
Huron	7.3	7.4	8.2	8.5	9.1	7.4	7.7	8.3	10.5	9.2	8.3
Kent	8.6	8.3	8.4	8.7	8.7	9.3	9.2	9.8	11.7	11.6	9.4
Lambton	9.5	9.1	8.1	8.4	9.1	8.0	7.6	8.6	10.8	9.7	8.8
Lanark	8.4	8.9	6.6	7.4	7.6	8.9	6.9	10.2	11.8	11.4	8.8
Leeds and Grenville	8.2	8.8	7.1	7.2	8.2	6.5	7.3	10.9	12.5	12.6	8.9
Lennox and Addington	9.4	7.3	10.1	7.7	7.0	10.2	6.8	9.4	12.6	11.3	8.9
Lincoln	11.4	12.8	10.9	14.3	11.4	13.0	13.1	12.2	14.4	12.5	12.6
Middlesex	10.4	11.6	8.9	10.9	10.1	10.0	9.6	8.7	10.7	10.0	10.1
Muskoka										11.4	11.0
Norfolk	7.3	8.1	8.5	9.5	8.2	8.1	9.2	9.4	12.1	10.4	9.0
Northumberland and Durham	8.1	9.9	10.7	10.1	9.7	10.5	9.9	10.1	11.6	11.6	10.2
Nipissing										23.5	20.5
Ontario	9.9	9.4	9.8	11.0	10.3	10.0	9.8	10.2	10.6	10.3	10.0
Oxford	10.9	11.1	9.7	11.4	10.9	10.9	10.3	11.3	11.8	11.5	10.9
Peel	9.2	7.8	7.7	7.5	7.9	7.8	7.1	9.4	9.1	9.2	8.2
Perth	8.3	8.2	8.9	9.1	8.1	8.9	9.0	8.8	9.5	10.8	8.9
Peterborough	10.6	11.4	11.1	12.1	10.8	12.6	10.4	11.2	12.0	12.7	11.4
Prescott and Russell	14.3	14.3	10.6	12.9	11.7	14.9	11.7	13.1	16.9	13.6	13.4
Prince Edward	10.1	11.3	11.1	11.5	11.6	12.8	9.7	13.8	12.4	11.0	11.5
Parry Sound										14.7	13.6
Rainy River										33.1	26.1
Renfrew	8.8	7.2	7.7	9.5	9.6	10.6	9.9	12.2	13.0	9.9	9.8
Simcoe	8.0	6.4	8.1	8.1	8.2	9.3	7.4	10.7	11.7	11.3	8.9
Stormont, Dundas and Glengarry	8.8	9.2	8.5	8.9	8.8	7.3	7.8	9.0	12.7	11.3	9.2
Thunder Bay										20.4	16.4
Victoria	9.1	7.7	9.9	10.9	10.0	9.7	9.0	9.8	10.8	10.8	9.7
Waterloo	11.1	11.9	11.6	10.5	9.9	9.9	10.1	10.1	10.9	10.2	10.6
Welland	11.1	9.4	12.4	10.5	11.1	9.5	11.0	12.1	14.4	12.9	11.4
Wellington	10.0	9.2	10.1	10.6	9.8	10.3	9.5	9.5	9.9	9.3	9.8
Wentworth	15.1	14.4	13.2	11.7	13.1	12.5	12.7	13.2	12.1	13.0	13.1
York	19.0	16.3	15.9	16.4	16.1	13.1	13.2	12.4	12.9	11.8	14.7
Average rate	10.7	11.1	10.2	10.7	10.6	10.3	10.1	10.9	12.2	11.5	10.8

Owing to the changing of territorial boundaries in Algoma, Nipissing, Muskoka and Parry Sound, they have been inserted in this table for 1897 and 1898 only.

TABLE 10.
Recapitulation by Classes of Diseases by Counties, 1898, including Cities and Towns.

Cause of Death.	Sex.	Nativity.	Social condition.	Ages.												Months.												Not given.			January.			February.			March.			April.			May.			June.			July.			August.			September.			October.			November.			December.			Totals.		
				0-1	1	2	3	4	5-9.	10-14.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45-49.	50-59.	60-69.	70-79.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.																																		
I. Communicable (Epidemic) diseases.....	885	824	1510	181	1314	190	205	216	125	145	159	116	286	87	82	89	58	42	40	37	26	42	53	66	33	8151	163145	129121	94112	103137	168174	1831798																																					
II. Other general diseases.....	3383	2875	3807	1205	1111	1755	1619	1839	374	97	45	31	25	89112	343	538	508	357	308	295	660	604	329	10327	418408	511480	404424	404437	421403	4185213																																							
III. Diseases of nervous system and organs of sense.....	1691	1506	2145	1009	43	1384	822	901	721	154	84	42	29	92	56	62	57	46	54	56	81	94	276	423	557	2588	25245	266299	268300	252285	258274	261234	2553197																																				
IV. Diseases of the circulatory system.....	803	958	994	813	44	244	774	833	2	2	5	4	1	35	47	41	50	45	58	94	81	103	275	537	330	112	9159	141166	180168	138145	141145	152144	1721831																																				
V. Diseases of the respiratory system.....	1484	1231	1855	829	31	1190	672	853	536	184	113	55	34	64	43	67	58	55	76	95	86	89	205	342	389	21311	293207	350386	285161	1117	91106	163179	2872715																																				
VI. Diseases of the digestive system.....	1473	1347	2257	535	28	1732	524	564	1144	178	54	36	23	70	73	75	70	69	70	75	62	61	182	266	229	75	8121	134132	141136	173351	1525	508328	1411362820																																				
VII. Diseases of the genito-urinary system.....	527	313	437	393	20	98	313	429	10	3	2	6	4	12	10	20	27	41	28	39	40	36	101	174	202	80	5	77	68	75	81	61	67	71	62	73	64	73	68	840																													
VIII. Puerperal diseases.....	245	214	31	..	5	221	19	15	53	60	49	47	15	4	2	20	27	19	24	34	21	26	14	12	16	13245																													
IX. Diseases of the skin and cellular tissue.....	36	38	51	23	..	31	18	25	19	1	3	..	2	1	..	1	2	1	1	2	4	2	13	11	7	4	..	9	3	11	14	5	..	5	8	4	7	3	74																														
X. Diseases of the locomotor system.....	14	6	17	3	..	9	3	8	2	1	..	4	1	2	1	1	3	1	..	3	3	..	2	2	..	3	1	3	2	1	20																																
XI. Malformations, diseases of infants, diseases of old age.....	3134	2588	23621	2063	61	3063	1303	1379	215	27	18	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1138	1635	7523	502517	515484	368408	504520	484432	4885745																					
XII. Suicide.....	60	31	51	32	8	14	26	51	4	9	6	3	5	7	11	16	23	5	1	1	8	1	8	14	6	7	9	8	5	10	91																													
XIII. Accidents.....	825	175	674	264	62	411	154	435	18	29	40	22	14	75	59	87	81	65	58	40	49	50	93	82	70	4424	84	54	75	75	80	107	100	97	86	82	77	741000																															
XIV. Ill-defined causes.....	302	488	563	255	32	263	301	280	26	31	17	11	35	30	23	37	39	42	40	47102	135106	5016	78	82	90	79	54	62	75	62	63	80	94	61	860																																		
Totals.....	13722	17686	11519	7911	5975	540	816	260	26	31	17	11	35	30	23	37	39	42	40	47102	135106	5016	78	82	90	79	54	62	75	62	63	80	94	61	860																																		

TABLE No. 11.
Recapitulation by Classes of Diseases by Cities, 1898.

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TABLE No. 12.
Recapitulation by Classes of Diseases by Towns. 1898.

TABLE

TOTAL DEATHS BY INDIVIDUAL

No. 13.

DISEASES BY COUNTIES IN 1898.

	Middlesex.	Muskoka.	Norfolk.	Northum'd & Durham.	Nipissing.	Ontario.	Oxford.	Peel.	Perth.	Peterborough.	Prescott & Russell.	Prince Edward.	Parry Sound.	Rainy River.	Renfrew.	Simcoe.	Stormont, D. & G.	Thunder Bay.	Victoria.	Waterloo.	Welland.	Wellington.	Wentworth.	York.	Totals.	
22	3	6	13	4	7	13	2	6	11	5	5	3	2	15	4	4	23	11	11	12	6	2	10	39	405	
2	1	8	2	2	2	..	2	2	2	1	1	1	1	1	2	3	2	17	9	3	3	3	9	115		
24	2	2	5	1	4	5	4	8	15	1	1	1	1	1	2	4	24	11	7	7	2	4	12	30	222	
2	1	3	4	4	5	15	5	5	2	1	3	31	2	1	1	1	13	11	23	21	3	5	1	8	126	
23	5	4	9	15	5	5	8	2	11	6	31	6	3	3	6	6	4	1	7	5	6	3	31	84	634	
5	2	4	6	3	15	5	5	2	2	3	3	3	2	1	2	2	1	1	4	5	3	3	3	22	192	
2	7	18	3	4	12	6	14	6	6	8	3	2	2	1	2	1	1	1	4	13	10	20	20	64	492	
23	2	1	1	1	1	2	2	3	1	1	2	1	2	1	1	2	1	1	1	1	1	1	1	4	25	
135	19	36	97	23	67	72	35	96	69	59	24	32	15	11	25	1	1	11	11	12	6	2	10	39	554	3,291
..	1	1	8	14	
51	6	16	37	3	17	15	19	32	18	7	13	1	3	1	1	12	27	28	1	9	29	23	38	43	156	
2	4	6	7	1	1	6	4	1	1	2	2	1	2	2	2	2	5	1	1	6	1	4	9	15	975	
7	5	2	1	3	2	2	2	6	4	2	2	1	1	2	2	2	6	5	3	4	2	1	5	17	157	
4	..	2	1	4	1	3	4	1	..	1	1	2	2	2	2	2	5	1	1	3	2	5	19	112		
1	1	1	1	1	1	2	1	4	2	13	2	1	1	1	6	6	5	1	1	6	4	4	1	2		
5	2	5	5	3	1	2	1	4	2	13	2	1	1	1	1	6	5	1	1	5	3	2	8	27	198	
12	2	7	..	3	3	..	8	2	6	6	6	2	2	2	1	1	2	2	1	2	1	1	4	42	214	
2	1	2	3	1	5	5	1	5	2	5	1	1	1	1	1	3	3	4	1	5	1	6	2	14	37	190
39	3	12	24	1	23	22	8	25	18	6	2	9	2	6	24	13	3	5	31	17	20	48	131	771		
3	..	1	5	..	1	2	2	..	2	..	3	3	1	..	3	3	6	17	65	
42	3	17	38	1	5	31	6	14	10	14	7	1	1	1	6	26	26	1	8	7	33	24	33	78	825	
6	..	..	..	1	1	1	1	1	1	1	1	1	1	1	1	2	1	..	..	..	..	..	14	18
5	2	4	7	9	3	2	4	3	
25	5	12	20	12	13	15	6	14	16	12	1	13	3	11	18	17	7	12	17	19	20	21	116	686		
2	1	..	5	3	3	..	1	1	1	1	..	1	1	1	1	5	1	1	1	1	1	3	4	10		
1	..	2	..	1	3	..	1	..	1	..	..	1	..	..	1	..	2	..	1	1	..	..	2	1
3	..	2	3	..	1	1	1	5	1	17	10	10	11	3	14	37	32	5	18	26	20	34	60	17		
68	13	15	33	8	34	31	10	27	21	17	10	10	11	3	14	37	32	5	18	26	20	34	60	194	1,260	
1	1	3	3	..	2	2	1	..	..	..	..	..	1	1	1	..	..	..	3	..	..	..	3	2
1	1	..	1	..	1	..	1	..	1	1	1	1	1	1	1	..	2	..	..	2	1	..	..	6
24	1	10	20	1	7	5	12	14	8	5	6	5	3	6	14	16	1	7	7	12	13	8	30	425		
10	11	6	12	8	7	1	2	9	9	9	1	1	2	11	29	8	5	15	10	8	22	55	308			
9	1	3	9	..	2	3	..	1	1	1	4	..	..	3	5	4	..	2	6	3	4	8	24	168
2	10	3	8	1	4	3	4	6	1	..	..	..	2	1	7	2	2	1	6	3	5	20	49	208
51	9	23	66	16	26	52	17	33	20	33	14	3	10	24	59	61	7	16	16	25	19	37	85	167	1,512	
3	..	1	3	1	..	1	1	3	..	..	1	1	1	3	3	3	1	1	3	1	..	4	2	5
10	1	1	15	2	5	5	2	4	2	6	..	2	1	5	3	11	1	5	6	7	5	7	20	223		
3	..	3	4	..	3	1	..	7	2	3	1	1	1	1	3	5	..	1	3	1	..	6	17	109		
1	1	1	..	1	1	3	1	..	1	1	..	1	..	1	2	..	..	..	1	1	..	4	..	27
1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	23
10	2	1	5	1	9	5	2	2	5	3	2	2	2	..	2	6	3	3	4	1	6	3	5	22	193	
37	4	14	19	16	21	15	4	19	15	58	7	12	8	42	41	47	4	18	24	17	22	40	226	1,325		
17	5	7	16	6	6	9	2	8	9	13	4	1	1	8	19	10	..	6	4	7	4	7	15	347		
5	..	2	3	..	3	1	4	1	..	1	..	1	5	6	..	6	2	1	..	2	1	..	2	10	101	
8	2	5	6	..	2	4	1	3	3	..	1	1	..	5	6	..	3	8	..	7	..	3	10	131		

TABLE No. 13.
TOTAL DEATHS BY INDIVIDUAL

III. Defined Causes.	Accidents.	Suicide.	Dis. of Dis. motion, Skin.	Malforma- tions.	Dis. of Loco- tion.	Puerperal Diseases.	Diseases of Urinary System.																			
								Algoma.	Brant.	Bruce.	Carleton.	Cumberland.	Elgin.	Essex.	Frontenac.	Grev.	Haldimand.	Halton.	Haliburton.	Hastings.	Huron.	Kent.	Lamport.	Leeds & Grenville.	Lennox & Addington.	Lincoln.
Oth'r Diseases of the Int'st				2	1	1	6	1	4	1	1	..	1	..	1	..	1
Diseases of the Liver.				..	6	6	12	..	7	2	3	13	8	6	8	..	5	6	3
Peritonitis (n't puerperal)				..	4	5	15	2	1	3	6	8	1	6	7	8	4	5	3	1
Iliac abscess (typhlitis, peri-				3	6	7	10	2	2	1	5	5	1	5	4	2	4	3	3	1
typhlitis, appendicitis.				..	4	3	5	2	1	1	3	1	5	1	3	1
Acute Nephritis.				3	8	9	20	4	6	13	16	12	8	8	13	14	..	8	28	6
Bright's Disease.																										
Other Diseases of the Kidneys and Adnexa.																										
Vesical Calculi.																										
Diseases of the Bladder.				1	4	6	9	1	5	3	3	5	3	3	2	3	..	1	6	1
Diseases of the Male Genital Organs.																										
Metriritis.																										
Oth'r Dis'es of the Uterus.																										
Ovarian Cysts and other Ovarian Tumors.																										
Other diseases of the Female Genital Organs.																										
Puerperal Septicaemia.				3	2	1	4	..	1	3	..	2	1	..	..	..	3	2	..	..	1	1	..	1	..
Puerperal Albuminuria and Convulsions.				..	4			1	..	1	1	5	1	1	..
Other accidents of Pregnancy sudden death.				2	1	6	..	3	3	6	3	7	2	2	2	3	5	4	5	2	4	..	..	2	..
Puerperal Disease of the Breast.				..	..	1	5	1	..	1	1	..	..	..	..	..	..	..	..	3	2	2	1	1	..
Erysipelas.				..	1	..	5	1	..	1	1	..	..	..	..	..	..	2	2	..	..	3	2	2	1
Other Dis. of the Skin & its Adnexa (Cancer except'd).				1	1	..
Pott's Disease.				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dis. of Bones and Joints.				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Amputation (for unspecified disease).				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Still-Births.				13	23	27	119	5	10	38	17	15	1	8	2	5	14	25	15	12	2	..	15			
Congenital Deformity and Malformations.				35	29	46	138	14	20	74	37	52	11	15	8	43	47	44	43	31	38	28	28	28	28	
Other Diseases of Infancy.				..	2	2	4	..	..	1	3	3	..	1	2	2	2	2	1	..	1	..	1	..	1
S-nile decay.				18	59	85	118	30	75	66	116	103	31	29	6	84	95	72	69	61	98	40	37	37		
By Cutting Throat.				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poison.				..	1	2	3	1	..	2	1	1	..	1	..	..	..	..	..	..	..	..	..	..
Strangulation.				..	1	2	3	1	..	2	1	1	..	1	..	..	..	..	..	..	..	..	..	..
Gas Poisoning.				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Drowning.				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Firearms.				..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poison.				..	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Fractures & Dislocations.				4	7	7	12	3	8	12	12	17	8	2	4	7	15	14	11	2	8	4	6	4	6	
Gunshot.				2	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lightning.				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Drowning.				5	6	5	10	..	4	12	8	4	2	..	..	..	..	..	..	..	..	..	..	..
Electric Cars.				..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bicycles.				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Railways.				1	6	..	..	7	1	4	3	2	3	1	2	..	15	..	7	4	10	6	..	1	1
Burns and Scalds.				5	1	..	..	3	1	3	3	..	1	1	..	..	2	..	6	3	..	1	..	1	1
Frozen to Death.				..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Strangulation.				4	2	11	8	..	7	7	8	4	3	..	10	13	6	8	11	7	13	5	..	5	2	
Tropsey.				1	6	7	11	5	6	6	10	6	2	1	..	5	11	1	6	9	5	2	..	2	3	
Tumors.				8	2	4	17	4	6	24	4	13	3	1	1	9	6	8	10	1	12	2	..	1	1	
Other Ill-Defined Causes.				..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Lockjaw.				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Totals.....	230	440	601	1,650	230	477	737	705	754	248	223	63	689	658	731	575	365	823	302	405						

—Concluded.

DISEASES BY COUNTIES IN 1898.

	Middlesex.	Muskoka.	Norfolk.	Northum'd & Durh'm.	Nipissing.	Ontario.	Oxford.	Peel.	Berth.	Peterborough.	Prescott & Russell.	Prince Edward.	Parry Sound.	Rainy River.	Renfrew.	Simcoe.	Stormont, D. & G.	Thunder Bay.	Victoria.	Waterloo.	Welland.	Wellington.	Wentworth.	York.	Totals.	
15	4	9	3	16	5	1	8	2	1	1	2	1	2	1	10	3	6	2	6	1	1	1	10	1	29	
8	1	3	5	20	8	5	6	2	4	2	4	2	2	1	12	10	2	2	5	6	6	5	10	32	285	
5	1	1	1	2	3	1	2	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	10	150		
19	1	6	20	8	5	9	1	1	12	10	2	4	2	2	1	23	19	4	6	16	14	9	35	86	234	
1	2	5	6	4	1	1	3	3	1	1	1	1	1	1	1	6	4	2	2	5	5	9	7	19	150	
5	1	2	5	4	1	1	3	3	1	1	1	1	1	1	1	23	19	4	6	16	14	9	35	86	520	
1	2	5	6	4	1	1	3	3	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	11	42	
5	1	2	5	4	1	1	3	3	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	6	28	150
2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	12
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	5
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	12
1	1	1	2	2	1	2	1	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	5	58
2	2	2	1	4	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13	53
5	2	1	4	3	5	2	2	3	2	3	2	2	2	2	11	11	7	3	4	5	2	1	10	134	134	
1	1	3	1	3	2	1	3	2	2	2	2	2	2	2	2	2	4	1	1	1	1	1	1	1	12	66
1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14
20	4	4	19	10	19	31	3	12	25	18	1	6	6	15	34	28	5	24	17	7	14	63	210	1	961	
58	18	18	63	49	28	39	11	27	32	136	10	23	8	60	46	57	9	29	32	27	51	79	259	1,950		
1	1	1	1	3	1	3	1	1	1	15	1	1	1	1	1	1	1	1	1	1	4	3	54	54		
133	19	34	134	10	53	65	41	82	60	51	33	8	56	114	94	1	43	62	37	56	86	213	2,780	2,780		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	
2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	3	1	2	2	1	1	1	1	33	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11	
4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	
34	4	6	9	6	7	16	3	7	6	3	7	4	5	6	15	21	6	5	9	8	9	15	34	408		
1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	2	2	33		
2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	
6	5	2	5	6	5	2	2	2	7	2	6	7	3	11	9	8	1	3	4	5	3	7	13	225		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8		
6	3	2	13	2	1	1	1	3	1	2	2	1	2	2	1	9	5	5	1	2	1	4	3	156		
8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	6	15	87		
2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4		
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4		
14	3	3	8	4	4	8	3	4	8	8	8	4	2	7	11	10	7	10	11	5	2	2	10	280		
16	1	5	10	3	10	2	8	4	6	4	2	3	4	11	7	2	6	2	4	8	5	2	5	28		
11	4	1	5	17	5	7	2	7	5	18	4	8	2	17	14	8	2	3	2	2	7	13	303	303		
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	19		
1,093	196	348	877	259	503	615	245	601	481	623	224	215	119	490	872	847	96	385	554	425	593	1,104	3,571	26,370		

TABLE No. 14.
Total Deaths by Individual Diseases in Cities in 1898.

General diseases.	Toronto.	Hamilton.	Ottawa.	London.	Kingston.	Brantford.	St. Thomas.	Guelph.	St. Catharines.	Belleisle.	Stratford.	Windsor.	Chatham.	Totals.
I.—COMMUNICABLE (EPIDEMIC) DISEASES.														
Typhoid Fever	32	7	20	12	11	9	1	.....	4	2	1	1	4	104
Smallpox .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	8	.....	22	1	.....	.....	.....	3	.....	.....	1	.....	.....	35
Scarlet Fever	28	10	3	9	1	2	1	2	1	2	.....	1	1	57
Whooping Cough	7	1	11	1	2	1	1	.....	1	.....	.....	1	1	27
Diphtheria and Croup	63	22	32	11	3	2	3	.....	3	3	3	3	2	147
Influenza	18	1	8	3	1	3	1	.....	.....	.....	1	.....	.....	36
Other epidemic diseases .....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
II.—OTHER GENERAL DISEASES.														
Pyæmia and Septicaemia	58	13	14	11	4	2	2	5	5	2	2	1	4	123
Malarial Fever	3	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	5
Tuberculosis and Scrofula	483	109	148	64	45	23	13	21	21	15	19	23	14	998
Syphilis	7	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
Cancer	129	31	29	16	20	2	1	18	2	4	12	3	7	274
Rheumatism and Gout	12	5	.....	1	2	3	.....	3	1	1	2	.....	2	31
Diabetes	16	4	6	4	2	.....	.....	.....	1	1	1	1	1	36
Other general diseases	12	3	5	2	3	.....	.....	2	.....	.....	2	1	1	30
Alcoholism, Acute and Chronic	1	1	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	5
LOCAL DISEASES.														
III.—DISEASE OF NERVOUS SYSTEM AND ORGANS OF SENSE.														
Encephalitis	20	5	4	3	3	3	3	3	1	1	2	1	1	46
Simple Meningitis	35	4	21	9	2	7	1	.....	1	2	2	2	3	89
Epidemic Cerebro-spinal Meningitis	28	12	9	1	5	2	.....	1	1	1	1	3	1	65
Congestion and Hemorrhage of the Brain	106	32	22	24	6	7	1	10	1	4	3	2	2	220
Softening of the Brain	14	4	2	1	.....	.....	.....	.....	.....	1	1	1	1	23
Paralysis without specific cause	57	13	35	16	18	4	7	2	6	3	1	5	5	172
Insanity	5	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
Epilepsy	17	.....	4	3	.....	1	.....	1	.....	.....	.....	.....	1	27
Convulsions (not puerperal)	90	17	78	14	12	2	5	6	3	3	5	7	7	242
Other nervous diseases	6	3	4	.....	2	1	.....	1	1	.....	.....	.....	.....	18
IV.—DISEASES OF CIRCULATORY SYSTEM.														
Pericarditis	1	1	2	1	.....	.....	.....	.....	1	.....	.....	.....	.....	6
Endocarditis	14	3	1	.....	1	2	.....	1	.....	1	2	.....	.....	25
Organic Heart Diseases	148	42	49	28	17	11	3	10	15	12	2	16	9	362
Angina Pectoris	2	2	2	.....	1	.....	.....	.....	2	.....	.....	2	1	11
Diseases of the Arteries, Atheroma, Aneurism, etc	5	.....	1	.....	.....	.....	.....	.....	1	.....	1	.....	1	8
Other diseases of the Circulatory System	22	6	10	7	8	3	4	.....	3	.....	9	1	1	74
V.—DISEASES OF THE RESPIRATORY SYSTEM.														
Acute Bronchitis	43	17	36	4	6	.....	.....	4	6	1	2	1	1	120
Chronic Bronchitis	19	7	4	3	4	.....	2	1	4	3	.....	1	.....	48
Broncho-pneumonia	41	16	19	.....	.....	1	4	3	1	1	1	1	1	86
Pneumonia	132	53	50	25	26	19	11	6	11	13	5	10	7	368
Pleurisy	3	2	1	1	.....	.....	.....	.....	.....	.....	1	1	1	8
Congestion of the Lungs (including pulmonary apoplexy)	17	6	12	5	.....	3	2	.....	1	2	1	1	1	49
Asthma and Emphysema	14	2	3	.....	2	1	.....	.....	.....	1	.....	1	1	23
Other diseases of the Respiratory System .....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	2	1	1	4
VI.—DISEASES OF THE DIGESTIVE SYSTEM.														
Ulcer of the Stomach	4	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	5
Other diseases of the stomach (Cancer excepted)	19	3	3	2	3	3	.....	.....	2	.....	1	1	2	39
Infantile Diarrhoea and Gastro-enteritis, ("Cholera Infantis")	182	30	158	17	15	11	6	10	6	8	3	12	10	468
Diarrhoea and Enteritis (not infantile)	13	1	5	6	3	3	.....	2	2	1	1	1	1	37
Dysentery	3	1	2	2	.....	.....	.....	.....	2	2	1	1	1	13
Hernia and Intestinal obstructions	9	2	2	5	3	1	2	3	1	2	1	1	2	31
Other diseases of the Intestines	1	.....	6	.....	4	1	2	2	1	2	1	2	1	14
Diseases of the Liver	26	7	10	7	1	4	2	.....	2	.....	2	.....	.....	59

TABLE No. 14.—*Continued.*

General diseases.	Toronto.	Hamilton.	Ottawa.	London.	Kingston.	Brantford.	St. Thomas.	Guelph.	St. Catharines.	Bellefonte.	Stratford.	Windsor.	Chatham.	Totals.
Peritonitis (not puerperal)	49	9	14	2	5	3	...	3	4	1	...	1	2	93
Iliac abscess (typhilitis, perityphilitis, appendicitis)	16	6	5	3	3	2	1	4	1	3	1	...	...	45
VIII.—DISEASES OF THE GENITO-URINARY SYSTEM.														
Acute Nephritis	22	3	4	...	1	3	...	...	...	1	...	1	...	34
Bright's Disease	70	19	15	9	9	3	1	4	2	7	2	4	2	147
Other diseases of the Kidneys and Adnexa	2	...	1	...	...	...	...	...	...	1	...	...	...	4
Vesical Calculi	9	2	...	...	2	1	...	2	...	...	...	1	...	17
Diseases of the Bladder	19	6	8	1	3	4	...	...	3	...	...	2	...	46
Diseases of the male Genital Organs .....	...	...	1	2	...	...	...	...	...	...	...	...	...	3
Metriasis .....	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Other diseases of the Uterus	1	...	1	1	...	...	...	...	...	...	...	...	...	3
Ovarian Cysts and other Ovarian Tumors .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other diseases of the female Genital Organs	3	...	1	2	...	...	...	1	1	...	...	...	...	8
VIII.—PUERPERAL DISEASES.														
Puerperal Septicaemia	2	...	3	1	...	...	...	...	1	...	...	1	...	8
Puerperal Albuminuria and Convulsions	8	4	...	...	...	...	...	...	...	...	...	2	...	14
Other accidents of Pregnancy sudden death	10	2	...	...	...	...	1	...	2	...	1	1	1	18
Puerperal Disease of the Breast .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
IX.—DISEASES OF THE SKIN AND CELLULAR TISSUE.														
Erysipelas	9	...	3	...	1	...	...	2	...	1	...	...	...	16
Other diseases of the Skin and its Adnexa (Cancer excepted)	1	...	...	1	...	...	...	...	...	...	...	...	...	2
X.—DISEASES OF THE LOCOMOTOR SYSTEM.														
Pott's Disease	2	3	...	...	...	...	...	...	...	...	...	...	...	5
Disease of Bones and Joints .....	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Amputation (for unspecified disease)	1	...	...	...	...	...	...	...	...	...	...	...	...	1
XI.—MALFORMATIONS, DISEASES OF INFANCY, DISEASES OF OLD AGE.														
Still-Births	187	52	86	11	13	13	6	4	9	2	7	18	11	419
Congenital Debility and Malformations	207	52	109	24	13	22	5	13	15	7	3	16	7	493
Other diseases of Infancy .....	...	4	2	1	1	...	...	...	...	1	...	...	...	3
Senile decay	152	48	56	35	50	18	16	8	8	15	18	6	12	442
XII.—SUICIDE.														
Poison	8	1	1	...	...	...	...	...	...	...	...	1	...	11
Strangulation	1	1	...	...	...	...	...	...	...	1	...	1	...	3
Gas Poisoning .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Drowning .....	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Firearms	1	1	1	...	...	...	...	1	...	1	...	1	...	5
XIII.—ACCIDENTS.														
Strangulation	3	...	2	...	...	...	...	...	1	...	...	...	...	6
Fractures and Dislocations	25	13	6	25	6	4	2	1	1	1	4	2	2	92
Gunshot	1	1	...	...	...	...	...	...	...	...	...	...	...	2
Lightning .....	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Drowning	10	4	7	4	4	3	1	2	3	...	...	1	4	43
Electric Cars	3	1	1	1	...	...	...	...	...	...	...	...	...	6
Bicycles .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Railways	3	2	6	4	1	3	3	1	1	5	...	4	1	34
Burns and Scalds	15	5	3	2	...	1	1	...	...	1	...	3	...	31
Homicide	4	...	2	...	...	...	...	...	...	...	...	...	...	6
Gas Poisoning .....	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Poison	3	...	...	3	...	...	...	...	...	...	...	...	...	6
XIV.—ILL-DEFINED CAUSES.														
Dropsy	5	2	6	7	...	1	4	...	1	4	...	...	...	30
Tumors	30	4	8	5	5	1	1	...	1	1	1	...	...	56
Other Ill-defined causes	11	4	11	5	1	1	2	...	1	2	3	...	...	41
Lockjaw .....	...	1	1	1	...	...	...	...	1	...	...	...	...	4
Total	2,866	749	1,221	474	353	219	117	159	167	149	120	158	142	6,894

TABLE
Total Deaths by Individual

General Diseases.		Barrie.	Berlin.	Bracebridge.	Brockville.	Brampton.	Cayuga.	Cobourg.	Cornwall.	Goderich.	Lindsay.	L'Original.	Milton.	Napanee.	Niagara Falls.
I.—COMMUNICABLE (EPIDEMIC) DISEASES.															
1. Typhoid Fever	1	1	1	2	2	2	3	1	1	5	5	5	1	1	1
2. Smallpox															
3. Measles					1			2			2				
4. Scarlet Fever						1									
5. Whooping Cough									8						
6. Diphtheria and Croup			13		5			1	2		1		1	1	1
7. Influenza		1	1		1										
8. Other Epidemic Diseases															
II.—OTHER GENERAL DISEASES.															
1. Pyeamia and Septicaemia	1	1		3	2	1	2	1			1		1	1	2
2. Malaria Fever	1										1				
3. Tuberculosis and Scrofula	13	10	4	26	10	1	6	17	5	11	1	7	8	3	
4. Syphilis															
5. Cancer	1	4		8	1		8	2	2	3			1	1	2
6. Rheumatism and Gout	1	1			2		2								
7. Diabetes	1			1	1			1							
8. Other General Diseases						1		2	2		1				
9. Alcoholism, Acute and Chronic							1								
LOCAL DISEASES.															
III.—DISEASES OF NERVOUS SYSTEM AND ORGANS OF SENSE.															
1. Encephalitis	1	1			1						2				1
2. Simple Meningitis	1	2		2			2		1						
3. Epidemic Cerebro-spinal Meningitis					1			1			1				1
4. Congestion and Hemorrhage of the Brain	3	7	1	7	2		1	6	2	1		3	3		
5. Softening of the Brain							2	3	1		1		1	4	3
6. Paralysis without specified cause	1														
7. Insanity	2														
8. Epilepsy						1			1						
9. Convulsions (not puerperal)	1			1			4	5		2	1				4
10. Other Nervous Diseases				2			1	1	1						
IV.—DISEASES OF CIRCULATORY SYSTEM.															
1. Pericarditis										1					
2. Endocarditis															
3. Organic Heart Diseases	2	2	2	19	3	1	2	4	3	8			1	2	
4. Angina Pectoris	1				1			1		1					
5. Diseases of the Arteries, Atheroma, Aneurism, etc															
6. Other Diseases of the Circulatory System	2				1	2		2	1		1		2	1	
V.—DISEASES OF THE RESPIRATORY SYSTEM.															
1. Acute Bronchitis	3	3	1	3				2		2					2
2. Chronic Bronchitis	1	1		1				1		1					1
3. Broncho-pneumonia				4	3			1		1			1	1	
4. Pneumonia	9	3	3	10		1	8	3	3	6		1	2	1	1
5. Pleurisy															
6. Congestion of the Lungs (including pulmonary apoplexy)				1					1	1				2	1
7. Asthma and Emphysema								1							
8. Other Diseases of the Respiratory System							1								
VI.—DISEASES OF THE DIGESTIVE SYSTEM.															
1. Ulcer of the Stomach															
2. Other Diseases of the Stomach (Cancer exc-pt'd)											1				1
3. Infantile Diarrhoea and Gastritis ("Cholera Infantum")	5	6	1	10				2	14	2	6	1	1	1	1
4. Diarrhoea and Enteritis (not infantile)			1	1				2	2		1		1		
5. Dysentery			1		2		1			1		1			
6. Hernia and Intestinal obstructions				1	2			1	1	1	3				

15.

Diseases by Towns in 1898.

TABLE

General Diseases.		Barrie.	Berlin.	Bracebridge.	Brockville.	Brampton.	Cayuga.	Cobourg.	Cornwall.	Goderich.	Lindsay.	L'Original.	Milton.	Napanee.	Niagara Falls.
VI.—DISEASES OF THE DIGESTIVE SYSTEM.—Continued.															
7. Other Diseases of the Intestines	1		1											1	3
8. Diseases of the Liver		1	2		1										1
9. Peritonitis (not puerperal)															1
10. Iliac abscess (typhlitis, perityphlitis, appendicitis)	1	1	1						1		1				2
VII.—DISEASES OF THE GENITO-URINARY SYSTEM.															
1. Acute Nephritis		3	7		2				3	1	1				2
2. Bright's Disease					5					7		1			
3. Other Diseases of the Kidneys and Adnexa												1			
4. Vesical Calculi															
5. Diseases of the Bladder						1				1					
6. Diseases of the male Genital Organs															
7. Metritis															
8. Other Diseases of the Uterus															
VIII.—PUERPERAL DISEASES.															
1. Puerperal Septicaemia						1									
2. Puerperal Albuminuria and Convulsions															
3. Other accidents of Pregnancy sudden death							1			1					
4. Puerperal Disease of the Breast															
IX.—DISEASES OF THE SKIN AND CELLULAR TISSUE.															
1. Erysipelas								1							
2. Other Diseases of the Skin and its Adnexa (Cancer excepted)															
X.—DISEASES OF THE LOCOMOTOR SYSTEM.															
1. Pott's Disease															
2. Diseases of Bones and Joints															
3. Amputation (for unspecified Disease)															
XI.—MALFORMATIONS, DISEASES OF INFANCY, DISEASES OF OLD AGE.															
1. Still-Births	5	8				2			1		4				1
2. Congenital Debility and Malformations	4	10	3	13	2			6	10		9	1		4	7
3. Other Diseases of Infancy	10	11	3	12	4			15	9	7	10		1	6	2
XII.—SUICIDE.							1								
1. Poison															
2. Strangulation															
3. Gas Poisoning															
4. Drowning															
5. Firearms															
X (II).—ACCIDENT.														1	1
1. Poison															
2. Fractures and Dislocations	1	2			2				1		1			1	1
3. Gunshot															
4. Drowning	1	1			1							2	1	2	
5. Electric Cars															
6. Bicycles															
7. Railways	1				5						1				
8. Burns and Scalds			1								1	2			
9. Hanging				1											
XIV.—ILL-DEFINED CAUSES.															5
1. Dropsy					3		1			1		2	2		
2. Tumors			1	2		3			1		2	1			
3. Other Ill-Defined Causes			1	2					1		2				
Total	80	113	23	160	41	7	91	118	42	90	4	18	46	45	

15.—Continued.

	North Bay.		Orangeville.	Owen Sound.	Parry Sound.	Peterborough.	Pembroke.	Perth.	Fiction.	Port Arthur.	Rat Portage.	Sarnia.	Sault Ste. Marie.	Simcoe.	Toronto Junction.	Walkerton.	Welland.	Whitby.	Woodstock.	Total.
1	1	2	1	1	2	1	2	2	1	1	2	2	1	2	2	1	1	1	1	3
																			22	
																			17	
																			16	
2	2	2	2	3	3	1	3	2	3	1	2	1	2	1	1	1	1	2	2	54
																			8	
																			54	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2
																			5	
																			1	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
																			4	
																			1	
																			2	
																			3	
																			7	
																			3	
																			3	
																			3	
1	1	7	2	9	3	5	7	4	6	1	1	1	1	1	1	6	73
7	9	3	8	7	6	2	5	6	7	8	1	8	1	2	5	1	1	3	157	
3	4	16	10	4	4	10	1	.....	9	3	4	2	7	3	6	9	9	9	185
		1	1	1	1	1	1	2	3	1	1	1	1	1	1	1	1	1	4	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	
1	3	2	3	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	3	
																			3	
																			3	
																			25	
																			1	
																			2	
																			16	
																			7	
																			1	
																			18	
																			21	
																			13	
31	29	123	33	154	66	43	53	45	86	90	44	40	71	37	28	35	105	1,991		

TABLE

Deaths from Consumption in

Counties.

	Agents.	Artists	Archit. cts.	Bakers.	babters.	butchers.	butter d-cts.	Book-keepers.	Cookin d-cts.	Crack mitts.	Frickmakers.	Gamblers.	Builders and contractors.	Carpenters.	Cabbi etmakers.	Compos.	Cooks.	Chrmits and druggists.	Cream-n.	Carrage and wa gommakr.	Cents.	Cheesemakers.	Cigarmakers.	Commercial travellers.	Children under 10 years old.
Algoma																									2
Brant	1																								10
Bruce																									12
Carleton		2			1										4										33
Dufferin					1	1																			5
Eggn																									4
Essex		1	2		1				2	1					1										13
Frontenac										1															5
Grey																									2
Haldimand																									1
Haliburton																									4
Halton																									8
Hastings																									9
Huron																									8
Kent																									6
Lambton																									5
Lanark																									18
Leeds anl Greenville		1	1		1																				6
Lennox anl Addington	1																								4
Linco'n																									12
Midll-sex																									3
Muskoka																									8
Norfolk																									12
Northumberland and Durham																									6
Nipissing																									11
Ontario																									7
Oxford																									4
Peel																									0
Perth	1	1																							11
Peterborough																									3
Prescott and Russell																									6
Prince Edward																									6
Parry Sound																									5
Rainy River																									1
Renfrew																									7
Stormont, Dundas and Glengarry	1		1																						10
Simcoe																									6
Thunder Bay																									6
Victoria																									8
Waterloo																									3
Welland																									6
Wellington																									21
Wentworth	2	1	2	3	3	1	2	2							1	4		1	1	14		1	1	1	149
York																									
Totals.....	5	1	2	6	16	7	3	19	3	12	2	1	1	21	8	3	1	4	4	7	45	1	3	7	471

No. 16.

Ontario by Occupations in 1898.

TABLE No. 16.—*Concluded.*

Deaths from Consumption in Ontario by Occupations in 1898.

Counties.

	Public officials.	Policemen.	Railroad employees.	Servants.	Students.	Stonecutters.	Shoemakers.	Sailors.	Seamstresses.	School teachers.	Spinners.	Tailors.	Tinsmiths.	Teamsters.	Telegraph operators.	Telephone operators.	Tanners and curriers.	Volunteers, soldiers and pensioners.	Undertakers.	Veterinary surgeons.	Watchmakers and jewellers.	Weavers.	No occupation given.	
Algoma																							2	
Brant				2	1																		6	
Bruce				1																			7	
Carleton	4		2	3	4		1		1														26	
Dufferin			1	1																			7	
Elgin			1	1																			8	
Essex			1	2	1				2														17	
Frontenac				2	1				2														28	
Grey				2				2		1													27	
Haldimand																							6	
Haliburton																							1	
Halton							1																3	
Hastings							1																19	
Huron																							5	
Kent					1	1		1															26	
Lambton	1					1																	13	
Lanark						1																	14	
Leeds and Grenville				1	2	4																	32	
Lennox and Addington	1																						9	
Lincoln					3	2	1		1		1												4	
Middlesex				1	1	3	1	1															32	
Muskoka							1																5	
Norfolk																							7	
Northumberland and Durham						2		1			1				1	1							19	
Nipissing						1										4							5	
Ontario						1	1									5							7	
Oxford				1	1	1					2	3	1										3	
Peel						1	3																12	
Perth				1		2	1	1								14	1						8	
Peterborough				1			1					2											17	
Prescott and Russell												1											25	
Prince Edward								1															6	
Parry Sound																	2						3	
Rainy River																1							4	
Renfrew						4										5							11	
Stormont, Dundas and Glengarry	1	1		1							2	8											23	
Simcoe					1				1	3	14	1											29	
Thunder Bay								1															1	
Victoria						2										11		1					7	
Waterloo					1	2		1															9	
Welland						1						1	4				1						5	
Wellington						1	1				1	4				2	1						11	
Wentworth						1	1				1	4	1				1	2					41	
York				1	2	14	7	2	3	1	4	1				1	2					1	2	116
Totals.....	7	3	12	51	42	11	9	9	14	20	131	12	3	10	3	2	2	1	1	1	6	3	666	

